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# TRANSACTIONS

OF THE

# Essex Agricultural Society

## IN MASSACHUSETTS,

FOR THE YEAR

# 1871,

WITH THE

# ANNUAL ADDRESS

BY

## HON. JOSEPH S. HOWE.

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# ADDRESS.

Mr. President and Gentlemen of the Essex Agricultural Society:

When I received your invitation to give the Annual Address before this Society, I accepted it with many misgivings. It seemed to be a hazardous experiment for an ordinary farmer but little used to the pen, and still less accustomed to the rostrum, to attempt to fill a place in the long line of distinguished orators, statesmen and agriculturists, whom the Society have honored by calling to this duty, and who have honored the Society by accepting it.

But we farmers know that a luxurious diet, although very pleasant and appropriate to Thanksgiving and Christmas, does not, after all, fit us for active duty in the field so well as a judicious mixture of Johnny cake or brown bread. So perhaps it may be as profitable for us to-day, if the *quality* of our intellectual entertainment

is lessened, and the time devoted to a consideration of the ordinary details of our business.

One of the chief hinderances to agricultural progress is the reluctance farmers feel towards giving the public the benefit of their experience, either by writing or by speech. There are men before me to-day, whose locks have whitened in the sun and wind and toil of the farm,—men shrewd, observing and practical, who have wrung from the soil all they possess of worldly wealth,—men competent to teach many of those who attempt to instruct us, but who are only unwilling to make the attempt. Could we obtain a record of the experience and practice of these men the result would be invaluable.

Although tilling the soil has been one of the chief occupations of the race ever since our first parents were driven from the garden, yet almost the whole field of practical agriculture is debatable ground. There is comparatively little absolutely *known* of the mysterious processes of growth daily going on before our eyes, and men of equal judgment and experience differ widely in their theories.

The census returns show that the relative number of farmers is diminishing, especially in the New England States, and that the tendency of population is to gather into cities. Whether this apparent decline in agriculture is because the culture of land pays less return, or because improved implements have taken the place of manual labor, or whether the decline is *only apparent*, is a problem difficult of solution. It is certain that the demand for all the varied products of the soil is greater than ever, and consumers are slow to believe that the prices they pay are not sufficiently high. At the same time some of us fail to see the substantial tangible evi-

dence that our business is profitable. I have thought, therefore, that we might well occupy the time allotted to this address in considering the general plan of management which an Essex County farmer should adopt, and also some of the difficulties he will meet in the prosecution of his business.

In the first place we must recognize the fact that our agriculture, especially that of Eastern Massachusetts, is in a transition state, and adapt our business to the wants of the times. The best method for the practice of thirty years ago fails now to yield any profit. The better facilities for transporting produce, the high price of labor, the greater cost of living and high taxes, all combine to render it almost impossible for the farm in Eastern New England to pay a profit under the old system of culture. The increased price of the great agricultural staples does not keep pace with the increased cost of production. The rich lands of the West can and will furnish us with these articles at prices ruinous to an Eastern farmer. So long as the Western farmers can pursue their present course of impoverishing the soil by continual cropping, just so long it is idle for the Eastern farmer to attempt to compete with them. Our soil, originally far less productive than theirs, has already undergone that process, and we must restore in some measure the exhausted elements of fertility before we can expect large returns.

The cost of cultivation is the principal item of expense that enters into the calculations of a Western farmer, while here the manure and labor necessary to its application, forms the heaviest charge. The facilities which steam has furnished for cheap and rapid transportation, bringing the products of the South and West

to our very doors, has wrought a change in the condition of New England agriculture, whose magnitude we cannot yet estimate. The old opinion that the farmer should produce everything that he consumes, and the kindred notion that he should consume as far as possible everything which he produces, are exploded, and he finds he must adopt the free trade principle of producing those commodities which yield him the most profit, which his circumstances best fit him to produce, and supply his remaining wants from other sources.

If we can raise onions, squashes, carrots or cabbages, or any other product, and with this product buy twice as much corn as we can obtain on the same ground with a like expenditure, it is clearly poor economy to raise corn.

If we expect to make our business profitable, we must turn our attention to those crops which are required by our local markets,—crops which are perishable, or difficult or expensive to transport for long distances. We farmers of Essex are peculiarly situated. Encircled by a belt of large manufacturing towns and cities affording an abundant supply of fertilizing matter, and a ready market for every product with Boston and its surrounding cities, within easy reach of every town in the County, our choice of the crops we will grow is only limited by conditions of soil and climate. Here is a field for enterprise that a farmer a hundred miles from market, and away from a railroad, knows nothing about. He must do as our fathers did,—produce such articles as can be transported a long distance without injury, which do not involve too great an expense in carriage, and which do not need to be used at once. We can disregard all these conditions.

The practical considerations which should govern the farmer in his choice of crops are many, and vary with the surroundings of each individual. Hay is, and must continue to be, unquestionably, the leading crop for all, except those engaged exclusively in market gardening and horticulture. The small amount of labor necessary to its production, our nearness to a market, and, above all, the fact that only a small portion of our cultivated land can be used at once in the production of hoed crops, without expending more labor, manure and capital than most of us can employ, combine to make this crop the most important to an Essex County farmer. It is safe to say that most farms should be managed with special reference to the production of grass. And I mean by this, that the expenditure of fertilizers and rotation of crops should always have reference to the crops of grass which are to follow.

Some cultivate the same lot of ground year after year with a succession of hoed crops, meanwhile doing little or nothing to their grass lands. If, instead of this, the different parts of the farm should be successively cultivated, and then sowed with grass, the total income would be greater.

The census returns give the average yield of hay for the State of Massachusetts at a trifle less than a ton per acre. Perhaps the average for this County is somewhat larger, but yet it is far below what the soil is capable of producing. The culture of grass is as yet very imperfectly understood. The time and manner of sowing,—the kind of seed and amount per acre,—the time of cutting and mode of curing,—the effect of fall feeding,—the most economical kind of top dressing, and the time of applying it, are all disputed questions. Prob-

ably no rule can be laid down which will be equally applicable to each individual case.

There is no time of year which will invariably turn out to be the best for sowing. But I believe the opinion of the best farmers seems to be that, on the whole, there is less risk of failure if sown in early Fall or early Spring, and with no other crop. Too much care cannot be taken to secure a good "catch," because the future prosperity of the crop depends largely on a thorough stocking of the ground with plants. It is a "penny wise and pound foolish" policy to run the risk of injuring the young grass for the purpose of obtaining a little larger income the first season.

If land is moist and thoroughly stocked, it may be kept in good condition for several years by a judicious top dressing. But my own experience is that top dressing cannot be applied to high lands with so good a result. Manage as we may, in from three to five years the crop grows less, the wild grass begins to creep in, and in from five to eight years the land needs turning over and re-seeding.

Having started with the idea that grass must be the principal crop, a regular system of culture should be adopted. A portion of the "bound out" land should be ploughed up every year, and as near as may be a like part of the land annually laid down with grass; and we ought to proportion the quantity ploughed each season so that the whole tillage land can be cultivated by the time the grass becomes so much bound out as to need re-seeding. And here let me suggest that many of us would obtain a larger product at a less expense, if the labor and manure were concentrated on a smaller space of ground. I do not believe with some that what is

called "high farming" is the great panacea for all the "ills that agricultural flesh is heir to," It would have been absurd to recommend the "old country" system of agriculture to the Pilgrim Fathers, with all the wilderness before them, just as it would now be absurd to advise a settler in a valley of the Rocky Mountains to adopt the high culture system of Japan or Belgium. When land is plenty and cheap, and markets poor, it does not pay the farmer to cultivate highly. He can obtain an equal amount of produce easier and cheaper by cropping his land, and when it is exhausted, shifting his operations to "fresh fields and pastures new."

The more thickly settled the country, and the greater the demand for agricultural products, the more thorough the system of farming that will be most profitable. It is doubtful if the high culture system of Belgium would be profitable for us, even if practicable to adopt it; still I think it is time for us to take a long step in advance. It is impossible to lay down a rule which will be equally applicable to every one, for we are all more or less limited in the amount of available fertilizers.

But I think it is safe to say that if we have more land under cultivation than can be kept increasing in productiveness, it would be more profitable to turn a portion of it to pasture and cultivate less. In other words, if we find the tillage land of our farms is not annually increasing in fertility, economy requires us to increase the manure or diminish the extent of land cultivated.

Another point of importance is to so manage that the land cultivated each year should lie as much as possible together. Many farmers pay no attention to this, and cultivate hoed crops at parts of the farm remote from each other. The time lost in passing from one lot to

another in the course of the year, and in moving teams and tools, amounts to quite an item, especially where a large force of labor is employed.

I have stated the opinion that the most profitable culture of grass requires that as often as once in four to eight years much of our land should be thoroughly enriched and cultivated with some kinds of hoed crops. What these crops shall be depends upon a great variety of circumstances. I believe it is sound doctrine that, as a general rule, no hoed crop should be raised which, with average success, cannot reasonably be expected to pay the expenses of labor and fertilizers employed in its production and leave the land in better condition. We must also be careful to select such products as our land is adapted to produce. This can only be ascertained by actual trial, at the same time taking care to avoid the mistake of going into the culture of any fruit or vegetable too largely at first. Success in the cultivation of any crop, like the practice of any trade, requires a minute knowledge of all the details, which can only be gained by experience. If, therefore, the farmer proposes to undertake the cultivation of any new crop, the best plan is to begin in a small way, keeping a record of the time of planting, quantity and variety of seed, with other details of management, each year observing the results and increasing the amount of land devoted to its culture as may be found expedient.

Another consideration in the choice of crops is the character of the market to be supplied, its accessibility and wants. It is a well known truth that the increased supply of any article enlarges the demand. Many products which a few years ago were considered as a luxury which only the rich could afford, are constantly used by

the day laborers in our cities and villages. Twenty years ago a half acre of strawberries would glut any market in the County, and this delicious fruit was entirely unknown in the smaller village markets. Now there is scarcely a family which does not consume more or less, and their production is becoming a leading branch of horticulture. And so of other things. Supply the market with a really good fruit or vegetable, and the public will learn to use it.

Another important consideration affecting the choice of a crop is the size of the farm and facilities for obtaining labor for extra purposes. Most of us are so situated that we cannot readily increase our labor force very much in any emergency; hence we find it most judicious to employ a certain uniform number of men for the season. It becomes of importance then, that the general plan of management for the year should be so adapted to the force employed that there may always be enough to do, and yet that nothing may suffer. Unless the labor force can be increased at pleasure, economy of management requires that such crops should be planted, and at such times, that their management will not interfere one with the other. Here arises the greatest difficulty in raising strawberries and other small fruits, as well as early vegetables, on farms which produce large quantities of hay. The small fruits *must* be marketed in their season, and this is mainly at a time when hoeing and haying both need attention.

One of the chief difficulties in raising roots largely I have found to be the fact that they generally need hoeing and weeding during the early part of July, when they are pretty sure to be neglected, and if neglected too long, ruined.

Another point worth considering in the selection of a crop, is the use that can be made of it providing it cannot be readily sold.

Articles of good keeping qualities will usually find a market somewhere, but some of the most profitable kinds of produce are perishable, and must be disposed of in some way at once.

It is a good point in any product that it is worth something to feed to stock providing there is no sale for it in the market. If, for instance, we raise turnips or cabbages, and by reason of a large crop the price is so reduced that they hardly pay for marketing, they are worth what it costs to raise them to feed to cattle. If, on the other hand, we happen to have a surplus of onions, tomatoes, or cucumbers, we must encounter loss, because these articles have little or no value, except as food for man. Did time permit, many other points might be mentioned, having a bearing on the selection of crops.

But after all, nothing can be raised which will invariably prove profitable, under the most excellent management. The best rule seems to be to select a few specialties, and make their cultivation a study. It is poor policy to change continually from one thing to another, or to attempt to produce many commodities at once. If we decide to raise potatoes as a market crop, the fact that potatoes are too cheap to pay well this year, is not a good reason why we should not plant our usual breadth of land in potatoes next spring. Those farmers who thought they had discovered in the Early Rose, the philosopher's stone wherewith to transmute the baser elements of the soil to gold, will have discovered their mistake, and next year will plant something else, perhaps the Trophy Tomato or Norway Oats.

The place which stock should occupy in the best system of farming, is another unsettled question. An abundant supply of fertilizing matter is a prime requisite for successful farming; and whether it is more profitable to sell produce and buy manure, or feed the products of the farm to stock, depends upon the nearness to market and facilities for obtaining dressing for the land.

It needs no demonstration to show that raising the common kind of stock, such as is found in the great markets, will not pay in Essex County. A four weeks old calf generally sells for about as much money as an average yearling.

The fact that but little stock is raised in the county, and that usually from favorite or superior animals, shows that farmers do not find it for their interest to pursue this branch of husbandry. Neither can cattle be bought and fatted with profit, as they could before the modern facilities of transportation from the West.

The dairy is, and must be, the only branch of stock farming which will prove profitable in this section of New England. The production of milk for market, is fast becoming a leading business, and the large proportion of population who depend upon the farmer for a supply of milk, will make this a principal department of husbandry in the future. There is a mistaken idea abroad concerning the profit of this branch of farming. If we reckon milk at the wholesale price, and take into account the market value of the provender and the average quality of cows kept for this purpose, we shall probably find the actual profits of producing milk extremely small. This department of farming has engaged my attention for some years, and I find the annual results average very nearly the same.

I have usually kept a herd of from sixteen to twenty or more cows, and have endeavored to procure as good a quality of stock as could be obtained with reasonable effort, and to feed as highly as farmers usually consider judicious. The result has been, that the cows have yielded on an average from twenty to twenty-two hundred quarts of milk annually; varying with the quality of pasturing and freedom from accident to the stock. The average quantity of milk annually produced by cows throughout the country, is estimated, I believe, at less than eighteen hundred quarts, and it is probably safe to estimate the average quantity of milk obtained from the cows of Essex County, at not far from two thousand quarts per year.

The average wholesale price of milk is about four and a half cents per quart, making the average annual income of cows from ninety to one hundred dollars. To offset this, we must reckon the value of about two tons of hay, pasturing, a supply of green fodder in the fall, and ten or twenty dollars' worth of grain, to say nothing of labor and interest on capital.

Now to show what is *possible*, I will give the result of observations made a year or two since for the purpose of ascertaining the difference in income from different cows. I selected three cows from my herd, one of which had been kept upon the place several seasons and was thought to be fully an average cow; the other two were superior. The quantity of milk produced by each was carefully noted each week for a year. The result showed, that while the average cow produced only twenty-one hundred quarts per year, one of the others produced, thirty-one hundred and the other thirty-five hundred quarts, in the same time. There was no perceptible difference in

the cost of keeping. Now if one could obtain a stock of dairy cows which would produce three thousand quarts per year, milk could be furnished the consumer at a less price and a good profit to the producer. Any farmer who can procure a herd of such cows can make money with them.

There is no doubt but that the production of stock of a quality equal to this, is entirely within the range of possibility. The practical question is, How shall we get such animals? and this I regard as the most important point for every farmer who intends to make milk-raising a prominent part of his business. In the present condition of stock-breeding, it is impracticable for him to go into the market and purchase them, because such cattle are the exception, and those who own them do not often offer them for sale. The only way in which we can improve our milk stock seems to be to raise it ourselves, and perhaps the greater value of such animals will pay for doing it.

These are some of the points which an enterprising farmer must consider, and decide, if he expects to meet with success in his calling. But after he has decided on the most judicious plan of management for his peculiar circumstances, he will find new difficulties confronting him. Our hard lands of New England will not produce paying crops without a constant and large application of fertilizers. The source from which they shall be drawn will be to him a never ending perplexity.

The two principal sources of supply are stable and commercial manures. Our proximity to large towns enables many of the farmers of this county to obtain the former, and where this is practicable there is nothing which can supply its place. It is idle to attempt to car-

ry on a farm profitably, keeping up the fertility of the soil by the use of any commercial manure which has yet been placed within reach of Massachusetts farmers. It is, however, often expedient to use them to start a crop and to help out a short supply of other fertilizers. But he who places his reliance on them will find his profits vary in an inverse ratio to the cash paid out.

One of the most important and difficult problems we have to meet, is to devise a method of restoring the exhausted fertility of our pastures. We are constantly abstracting those elements of the soil contained in the products of the dairy and returning nothing. As a consequence we see our pasture lands fail year by year, slowly, it is true, but as surely as the return of the seasons. Most of our pastures are thorough to be cultivated, and an application of the ordinary fertilizers is temporary and too expensive. Much has been written recently on this subject, but no cheap and effective method of renovating worn out pastures has yet been pointed out.

Another difficulty of increasing magnitude, and perhaps the most perplexing of all, is the poor quality of much farm labor. We can many of us remember when young men from the country—neat, smart and intelligent—came among the farmers for work about the first of April in every year. Farmers' sons themselves, they knew how to perform every kind of farm work, and, best of all, they seemed to make their employer's interest their own. Now such help is rare, and we are obliged to depend largely on foreign labor, unfamiliar with our methods and often careless of our interests.

The farmer needs skilled labor almost as much as the manufacturer—unless his own eye can constantly over-

see all his work—because this work of the farm is not a continual repetition of the same operations, like much of the work performed in mechanics and manufactures, but it is constantly changing; hence skill and experience, as well as good judgment, are required for its best performance.

Farmers do not commonly estimate the difference between the value of the service of a really good man and that of a poor one at a sufficiently high rate. The men of greatest physical strength and endurance are not always the most valuable, but rather those of less strength, it may be, who understand the diverse manipulations of farm labor, who are careful of tools, industrious, and mindful of the interests of their employer. It is certainly true that the aggregate cost of farm labor is now more than farmers can afford; but if they would discriminate more and pay their best men higher wages, instead of paying common wages to inferior help, it would be better economy, and possibly the quality of labor might improve.

The farmer's life is a never-ending conflict with weeds and insects. Mechanical ingenuity has been taxed to provide instruments for eradicating weeds in the most thorough and economical manner, but yet some kinds almost baffle the farmer's efforts. By constant and timely cultivation, most of the common weeds which infest the garden and hoed crops, can be subdued.

But there are some great pests like white-weed, chickweed and witch-grass, which defy the most determined energy and skill and reappear like the phœnix when they seem to be exterminated. Some writers have the boldness to say that witch grass has a value, and even recommend it as a good grass to cultivate. But a long

and intimate acquaintance with this nuisance, does not impress one with a deeper sense of its virtues. The only redeeming quality it possesses, is that the hay, if cut early, is good fodder. Its presence in the soil, nearly doubles the labor of cultivation; and unless thoroughly kept in check, seriously diminishes the crop.

I think also, that its effect in a highly cultivated farm, is to materially reduce the crop of hay. It does not, like other grass, grow thickly, but tall, coarse, and with stalks widely separated. It kills out other more valuable grasses, and in a short time "binds itself out," unless the land is kept very rich. Although it may be impossible to exterminate this pest from land once thoroughly filled with its roots, it may be managed so that it will not materially injure the crops for some years.

It cannot be killed by hoeing, because the rootstock has innumerable joints, each with a bud and tuft of roots ready formed to grow, and cutting up has the effect to produce many plants instead of one; but like scourges of society, it may be effectually disposed of by strangulation. Any crop that will thoroughly shade the ground until late in the fall, will effectually destroy witch-grass.

The potato is one of the worst crops to raise on ground infested with this weed, because the tops usually die early in the fall, and the crop is not harvested until later. But a good growth of cabbages, turnips, or even fodder-corn, will sometimes kill nearly every root. The decay of the coarse, serpent-like rootstocks in the ground, not only adds an element of fertility, but renders the soil more friable; hence another reason for killing the roots in the ground, instead of attempting the hopeless task of digging them all out and carting them away.

Destructive insects are more troublesome than any

weed. They come when least expected, remain for a time and disappear without any visible cause. There is nothing more vexatious than to see our choice plants cut down by some destructive vermin that spring into existence as if by the sudden bidding of Omnipotence. Scarcely do our young squashes show themselves above the ground, than the striped bug appears and gorges himself on their tender leaves. We sift on some plaster, and congratulate ourselves that the plants are saved, when we find a creature on them more disgusting than any substance we can apply to drive him away.

We place a shingle in the hill, and by carefully watching every morning, and crushing every squash bug with a stone, our vines are at last free from bugs and in the full tide of luxuriant growth. We feel sure of a crop; but some fine day we see the vines begin to turn yellow and droop; we examine and find a worm in the stem against whose ravages we are helpless. We see our vines wither away one by one, until our plants and expectations of a plentiful crop are dead together.

And so almost every crop we raise, has one or more insect-enemies. What the canker-worm leaves the caterpillar eats; and if we protect our trees—as we may—against these crawling abominations, the curculio and codling moth attack the fruit, and it drops before half grown.

The flea and the cut worm eat the young cabbages; the white grub cuts the roots from the strawberry, while we helplessly look on and see the plants wither away; the currant worm deprives us of one of our most delicious summer fruits; the European cabbage worm has made its appearance, and we are told that we can neither prevent its ravages or make use of the plant after it has been tunneled by this destroyer; and worst of all we are

assured that the Colorado bug is steadily and surely making its way eastward, bringing with it ruin and destruction to the potato.

What purpose these destructive insects serve in the great plan of the universe is a puzzling mystery which may well be classed with the other great questions of "good and ill foreknowledge and free fate," which puzzled the fallen angels.

It is gratifying to know that the same hand that sends the bane sends the antidote. These insects not only have numberless enemies among the birds and other insects, but they all have their parasites by whose energies they are swept away, when they become too numerous for endurance.

We must regard these troublesome enemies with the philosophy thus expressed by a modern writer:

> "Great fleas have little fleas upon their backs to bite 'em,
> And little fleas have lesser fleas and so *ad infinitum*;
> And the great fleas themselves in turn have greater fleas to go on,
> While these again have greater still and greater still and so on."

Naturalists could render no greater service to the community than to investigate the habits of parasitic animals for the purpose of ascertaining whether it is possible to introduce or increase them by artificial means, so as to aid the farmer in his warfare against the insects that prey upon his crops.

The good farmer will be a careful observer of the weather. Not only during harvest, but at all seasons the farm work for the day often depends upon the weather probabilities. We must remember that storms do not come by chance, but in obedience to certain atmospheric laws, which are yet imperfectly understood, but which manifest themselves in certain well-known

phenomena, preceding or accompanying these disturbances. The system of weather reports inaugurated by the national government is unquestionably destined to be of immense value, not only to commerce, but to agriculture. It is almost certain that at no distant day the weather bureau at Washington will be able to predict the arrival of a storm at any particular point, with almost as much certainty as the arrival of the railroad train or steamboat. It will only remain to devise a system of signals by which this information can be transmitted over the country, to enable the farmer to prepare for a storm several hours in advance.

I have thus mentioned some of the contingencies against which the farmer can be more or less guarded; but there are others which are beyond his control or foresight.

The farmer's business is with the great forces of nature. He may lay his plans with the utmost skill and prudence, and drought, or wet or cold may destroy them all. His success, however, will depend upon the exactness with which his operations conform to the laws which govern the elements. In this respect his business differs from every other. The manufacturer, for instance, takes a piece of dead matter, like cotton or steel, and makes of it what he chooses. He knows beforehand just what kind of product will come from his machinery, the quantity he will obtain, and what it will cost to produce it. If his machinery goes wrong, he can stop it, and when he has once learned to manufacture an article, he can go on indefinitely producing exactly the same article.

The farmer desires to manufacture potatoes. He deposits his material—manure and seed—in the ground,

and patiently waits for the inscrutable machinery of sun and earth and air and water to form his product. Over this machinery he has no control whatever, and he cannot tell until harvest how much his product will be, or what it will cost. And if he obtains a superior article, he is not certain that he can reproduce it. Just here arises the uncertainty which surrounds the operations of the farmer. It needs no argument to show that the man who desires to cultivate the land intelligently, needs all the aid which science can furnish; and, indeed, science stops far short of his needs. He cannot succeed unless his plans harmonize with the laws of light, heat, growth and moisture, although he may be ignorant that such laws exist.

And here I would not be understood to advocate farming by the book. Undoubtedly the man of science, who knows nothing of practical husbandry, will, as a farmer, turn out to be a splendid failure, and simply because his science does not go far enough. Science is not yet sufficiently developed to enable him to construct correct theories of agriculture. We know from repeated observations that certain results usually follow certain processes, but we cannot tell the "why or wherefore." We know, for instance, that a small quantity of gypsum spread upon certain lands produces a wonderful effect, while a like application to other lands has not the slightest influence; and yet I believe no one has yet explained satisfactorily the mode in which this fertilizer acts.

Perhaps no men have rendered greater aid to agriculture than Boussingault and Liebeg, scholars of high scientific attainments, but who applied their knowledge to the practical culture of the land, for the purpose of ascertaining the laws which underlie the hidden proc-

esses of vegetable life and growth. Men like these are rendering the highest service to agriculture. Those who only experiment in their laboratories, and write out theories for farmers, based entirely on chemical analysis, are "blind leaders of the blind." But those who—like a distinguished member of this Society—devote themselves to an investigation of the relations which Chemistry sustains to agriculture, and test their theories in the field before giving them to the public, are entitled to the thanks of the whole community. It is only by the efforts of such men that agriculture can be raised to the rank of a science. A great hinderance which every observing farmer meets, is the length of time required to try an experiment. If we are desirous of ascertaining the comparative value of certain modes of culture, or certain special crops, we find we can make only one trial in a year; and some experiments, such as those relating to the application of manures, require more than a year to determine the result. And here we discover another important cause of the slow progress of agricultural science. The most carefully conducted experiment is liable to mislead, by reason of the many influences which affect the crop during its growth.

It is only by careful and *repeated* trials that the farmer becomes certain of the superiority of any particular method. And, even then, the effect he attributes to one cause may be owing to another. The increased crop, which he thinks is due to some special fertilizer, may be in consequence of some slight natural difference in soil, or amount of moisture, or other unseen cause. To illustrate:—Perhaps no class of experiments would be more valuable to farmers than a carefully conducted trial to ascertain the comparative value of the different

kinds of food commonly used for milch cows. We should naturally think that by carefully measuring the food, and changing from one kind to another, the question might, after a few days' experience, be decided. But every dairyman knows that the quantity of milk varies from day to day for other reasons. Extreme heat or cold, drink at irregular intervals, or the want of it, to say nothing of other causes, so modify the amount of milk produced, that it is next to impossible to determine with exactness how much the difference in the quantity of milk is owing to the difference in quality of the food consumed. We find a like difficulty in other experiments in husbandry. There are so many causes operating, which we can neither understand nor control, that it is not easy to determine how much of any effect is due to any one of them.

Here again we see the need of more light and further scientific investigation. We see, too, the value of a comparison of views among the tillers of the soil, who make claim to no other knowledge than that which is experimental. One of the most genial writers of the day, who unites to a high literary culture much practical knowledge of farming, recently gave the following excellent bit of advice:—"If farm writers would cultivate a nice habit of observation, and spend their writing force upon exactness of detail in regard to their personal experience, and leave scientific disquisition and theorizing to those who give their lives to such studies, I think we should all be much better off for it." Does not the value of an Agricultural Society depend mainly on the opportunity it affords for an interchange of opinion, and a public statement of agricultural experience?

If the statements I have made are in the main correct, it is manifest that at present there is no royal road to pecuniary success in agricultural pursuits, at least in New England. Some doubting agricultural Thomases even claim that there is no path here to satisfactory financial results, and that capital and labor yield in farming, more meagre returns than in any other business. On the other hand, the outside world commonly regards us as chronic grumblers. It says we are always complaining of short crops of hay, rotting potatoes, extreme drought or too much wet, while *in fact* we generally pay our bills, appear to have enough to eat, and sometimas have a little money in the bank, and we are triumphantly asked "Who ever knew a farmer to fail?"

Such remarks always remind me of a good neighbor who was terribly afflicted with periodical fits of sick headache. At these times he was obliged to give up work and retire to bed. His thrifty wife had never suffered the torments of this disorder, and thinking, probably, that a little energy and resolution would overcome the trouble, used to drive the good man up to his work with the consoling remark: "Nobody ever died of sick headache." Farmers never "*fail*" in the business sense of that word, because their liabilities are mostly for real estate, which, if not paid for, is usually mortgaged; but we have all known frequent instances of farmers who have bought farms on credit and were unable to keep them.

The truth, however, lies between the two extremes, as in the well known instance of the two ancient knights, who quarreled about the composition of the shield. Farmers generally seem prosperous, and the reason is that as a class they have the faculty of living within their means. If they lay up money they do it by not spending, rather than by large profits. The truth is, my friends, we cannot reasonably *expect* our business to yield *very large* money returns. It is a well established law of political economy, that any occupation pays a profit in proportion to the risk involved. This rule applies to all pursuits

in life as well as to ours. There are few ways of employing capital in which the risk of loss is so small as in farming.

Hence, we should naturally expect the return to be correspondingly small, but on an average, sure. And I have sometimes thought, that if the excess of profits over the losses in the different branches of industry could by any means be ascertained, we should perhaps find ours not very far behind the rest. It is true that agriculture does not present the *possibilities* of obtaining fortune or fame, which are so attractive in commercial or professional life; but it does not involve the hazard. We can scarcely conceive of an agricultural Vanderbilt or Astor. The farmer's gains depend upon the same rules of business which ensure success in any other calling. Brains, energy, and executive ability, applied to the culture of the land, will not fail to reward their possessor; moderately perhaps, but sufficiently for all the ordinary needs of life.

We must remember, too, that distinguished success in any pursuit falls to the lot of but few.

"The many *fail*, the one succeeds;"

and if we think our neighbor's prosperity is greater than ours, it is but fair to conclude that the fault is partly in ourselves.

We have thus taken a view of our occupation only from the narrow ground of pecuniary interest.

It does not come within the scope of my present purpose, to discuss the æsthetics of agriculture, or its relations to the happiness of those who make it the occupation of their lives; but I desire to remind you, in closing, that this aspect of our vocation should not be disregarded. There is no branch of industry, which has in itself so many elements capable of producing ease and content, as husbandry. Men of all trades and professions, work and drudge in the hope that they may some day obtain a competence, and retire to a landed estate to enjoy the fruits of their labor. But who ever knew a farmer to retire from the farm to mercantile or professional life, or even to

look forward to the day when he might enjoy his gains in some other employment? On the contrary, his attachment to the old homestead increases with advancing years.

The trees, which his own hand planted, the lands—once waste—which his skill and labor have caused to bud and blossom as the rose, the adornings of tree and shrub about his home, are all redolent with pleasant memories, and unite to weave a bond of attachment between the farmer and his farm, stronger than can be found elsewhere.

There is a healthy pleasure in country living in observing the myriad forms in nature, as well the graceful curve of a blade of grass, as the wavy swaying of a field of grain, or in viewing the woodland, the hills, and the whole broad landscape, under the varying aspects of the procession of the seasons; a pleasure which never cloys, which though old is ever new.

It is a mistake of our time, to neglect the cultivation of that faculty which enables us to derive pleasure from these sources. We are noted as a practical, matter-of-fact people, dealing with the hard realities of life rather than its graces. We take a certain pride in our rugged and robust ancestry, and place little stress on the more genial qualities they lacked.

"Beauty will not make the pot boil," is an old saw we take for our motto, forgetting that if it does not make the pot *boil* it furnishes a most piquant and relishing sauce to the contents.

We are endowed with the perception of beauty as a means of happiness; and it is neither unthrifty or effeminate for the farmer to prove all the pleasures

> "That valleys, groves, or hills or field
> Or woods or steepy mountains yield."

The most gifted men, from Xenophon and Cato and Virgil, down to our own day, have found their solace and delight in rural pursuits.

Let us, then, as farmers, make the most of our opportunities,

not only to increase our store, but to derive from our surroundings as much as possible of enjoyment for ourselves and those about us.

If our gains are less than those of other callings, let us remember that the deficiency is partly made up by the comparative freedom from the perplexities and turmoil to which they are exposed, and by the healthy vigor of body and mind which is the usual accompaniment of rural life.

# THE EXHIBITION.

The Fifty-First Annual Exhibition and Cattle Show was held at Ipswich, Sept. 26th, and 27th, 1871. The entries were as follows:

| | |
|---|---|
| Horses and colts, | 54 |
| Cattle, | 108 |
| Ploughing teams, | 18 |
| Swine, | 9 entries. |
| Sheep, | 67 |
| Poultry, | 70 coops. |
| Agricultural implements, | 13 entries. |
| Carriages, | 6 " |
| Leather articles, | 5 " |
| Bread and Honey, | 19 " |
| Flowers, | 81 " |
| Counterpanes and Rugs, | 58 " |
| Fancy work, | 93 " |
| Dairy, | 13 " |
| Grapes, Peaches and Assorted fruit, | 114 plates. |
| Apples and Pears, | 275 " |

# REPORTS, &C.

## FAT CATTLE.

The Committee on Fat Cattle award premiums as follows:

Paul T. Winkley, of Newburyport, first premium, the Society's Diploma and $10.

Second premium to Paul T. Winkley, of Newburyport, his off ox, $8.

Samuel A. Merrill, of Danvers third premium, $5.

Committee—James P. King, A. H. Gould, William Hadley.

### STATEMENT OF PAUL T. WINKLEY.

To the Committee on Fat Cattle.—*Gentlemen:*—The feed of the fat cattle, which I enter for premium, has been hay, and four quarts meal each per day, the year round, except when they were out to grass, which was about three months. They have done all the ox work on the farm. Their breed is native or unknown. They were six years old last spring.

## BULLS.

The Committee award to Francis Dane, of Hamilton, for

imported Jersey Bull, two years old, first premium, diploma and $10.

Charles Mitchell, Beverly, Jersey, second premium, $5.

Jos. Z. Gordon, West Newbury, Ayrshire, first premium, diploma and $10.

G. W. Herrick, Gloucester, Ayrshire, second premium, $5.

Joseph Kittredge, No. Andover, Durham, first premium, diploma and $10.

For the Committee—Eben G. Berry, Chairman.

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## MILCH COWS.

The Committee report twenty-one entries: eleven Jerseys, four Kerries, two Ayrshires, and the remainder grades, and the so-called native breed; and have awarded the following premiums:

The first premium (diploma and $15) for milch cows, to Henry G. Kimball, Bradford, for his grade Dutch cow.

The second premium ($10) to Francis H. Appleton, West Peabody, for his Ayrshire cow "Maud."

The first premium, for Jersey cows (diploma and $10) to Francis Dane, Hamilton, for "Empress."

The second premium ($5) to D. F. Appleton, Ipswich, for "Daisy of Ipswich."

The first premium for Ayrshire cows, (diploma and $10) to Francis H. Appleton, Broadfields Farm, W. Peabody, for "Maud," Ayshire Herd Book, No. 604.

The second premium ($5) to John C. Dennis, Marblehead, for "Mariana" A. H. B. 1538.

There were only two statements in regard to milk, feed, etc., which the Committee could accept, and so have awarded only two premiums. The rules of the Society are very clear on this point, and if exhibitors will not take the trouble to read them, they must take the consequences. Mr. D. F. Ap-

pleton, Ipswich, had on the grounds four Kerry cows, for exhibition only. We regret this, as many would be glad to know their capabilities as milkers.

We would like to impress on exhibitors the importance of furnishing complete pedigrees, with numbers in Herd Books, of the full blood animals, as by so doing, they would facilitate the duties of the judges, and fairer judgment could be given.

We would here mention that many of the cards and bits of paper on the pens were almost illegible, and nearly all were deficient in not stating for what premiums the entries were made; so that it was with some difficulty and waste of time that the Committee found the proper animals.

Could not this be remedied by the Society furnishing cards, with the proper classifications printed upon them?

We think there would be much advantage in announcing the premiums by means of cards or ribbons, placed on the animals or pens, the first day of the show, so that the people by personal examination may derive some benefit from the awards of merit, rather than delaying the announcement until the dinner on the second day when the Fair is nearly closed.

For the Committee—J. D. W. French.

### STATEMENT OF HENRY G. KIMBALL.

One grade Dutch cow, four years old. She dropped her last calf March 1st, 1871. She is with calf by full blood Dutch bull, to calve Jan. 14th, 1872. The first ten days in June last, she gave twenty-one quarts of milk per day. At that time her feed was nothing but good pasturing. The first ten days in September, she gave 15 1-2 quarts of milk per day. At that time her feed was dry pasture and a good hand full of corn fodder morning and evening. She has had no grain since the fifteenth day of May last.

### STATEMENT OF FRANCIS H. APPLETON.

To the Committee on Milch (Ayrshire) Cows.—*Sirs:*—I enter my thorough-bred Ayrshire cow "Maud," 604, for

premium. For age, see printed pedigree, herewith. She dropped her last calf Aug, 9th, and has not yet taken bull.

Last winter she was fed on hay and roots; on pleasant days, only, was in the yard most of the time. This summer she has been in the field during the day, and at night, in the barn or yard; has been fed, night and morning with either winter-rye, oats, or corn-fodder, cut green. My pasturage amounts to little or nothing, at present.

Maud, 604, calving Aug. 9th, gave during the first ten days of June, as follows:

| June. | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maud. | A. M. 8 | P. M. 9½ | A. M. 8½ | P. M. 9½ | A. M. 8½ | P. M. 9½ | A. M. 8 | P. M. 9 | A. M. 6½ | P. M. 10 | A. M. 8 | P. M. 9½ | A. M. 8 | P. M. 9½ | A. M. 7½ | P. M. 10 | A. M. 7½ | P. M. 10 | A. M. 7 | P. M. 9½ |

Total for the ten days, 173 1-2 pounds; average, 17 35-100 pounds per day.

During most of the first ten days of September, Maud was on exhibition at the New England Fair at Lowell, and fell off somewhat in her yield of milk, and no account was kept. She is now giving nearly nineteen quarts per day. Maud's largest yield has been between twenty-two and twenty-three quarts a day.

Maud has won first and second premiums at New York State Fairs, among a large competition; and two years has been in the Gold Medal Herd, of same Society.

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## HERD OF MILCH COWS.

The Committee award the first premium to Francis Dane, of Hamilton, diploma and $15.

John L. Shorey, Chairman.

## HEIFERS.

The Committee on Heifers, make the following report, viz:

Heifers three years old: First, George M. Brown, Bradford, diploma and $10.

Second, Francis Dane, Hamilton, $8.

Third, Francis H. Appleton, Peabody, $5.

Jersey Heifers, first, Francis Dane, Hamilton, $10.

Ayrshire Heifers: First, Francis H. Appleton, of Peabody, $10.

Heifers two years old: First, H. G. Herrick, Lawrence, $8.

Second, Charles J. Peabody, Topsfield, $5.

Third, Francis Dane, Hamilton, $3.

Yearling Heifers: First, R. G. Waters, Wenham, Heifer with calf by her side, $5.

Second, Francis Dane, Hamilton, $3.

Committee—William Foster, Stephen E. Noyes, Charles Nelson, D. T. Morrison, Sidney F. Newman.

### STATEMENT OF FRANCIS H. APPLETON.

To the Committee on (Ayrshire) Heifers.—*Sirs:*—I enter my two thoroughbred Ayrshire Heifers, "Lily Dale," 1475, and "Lassie," 1442, for premium. For age, see printed pedigree, herewith. "Lily Dale" dropped her last calf, Oct., 1870, and is due to calve Oct. 5, 1871. She was bought by me late last winter, but did not arrive on my farm until May 6th. Her yield, calving Oct., 1870, during the first ten days of June, was as follows:

| June. | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lily Dale. | A. M. 9½ | P. M. 11½ | A. M. 10 | P. M. 12 | A. M. 9 | P. M. 12 | A. M. 9 | P. M. 10 | A. M. 8 | P. M. 11 | A. M. 8 | P. M. 11 | A. M. 8 | P. M. 11 | A. M. 8 | P. M. 11 | A. M. 8 | P. M. 11 | A. M. 8½ | P. M. 11 |

Total for ten days, 197 1-4 pounds: average, 19 75-100 pounds per day.

During the first ten days of September Lily Dale was dry. She has won first premium at New England Fair, 1871. She has been second at N. Y. State Fair, 1870, and has twice been in Gold Medal Herd at latter Society's Shows. Her dam is a celebrated prize winner, in Scotland and this country.

"Lassie" dropped her last calf April 16th, 1871, and is due to calve April 3rd, 1872.

| June. | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lassie. | A.M. 10 | P.M. 11½ | A.M. 10½ | P.M. 13 | A.M. 10 | P.M. 12 | A.M. 11 | P.M. 10 | A.M. 10 | P.M. 11 | A.M. 9½ | P.M. 11 | A.M. 9½ | P.M. 11 | A.M. 10 | P.M. 11 | A.M. 9 | P.M. 12 | A.M. 9 | P.M. 11 |

Total for the ten days, 212 pounds; average, 21 2-10 pounds per day.

During most of the first ten days of September, Lassie was on exhibition at the New England Fair at Lowell, and fell off, somewhat, in her yield of milk, and no account was then kept. She is now giving a little over 14 lbs. per day. Her best yield has been an average of 25 lbs. for two months time.

Lassie won second premium at New England Fair, 1871.

Lily Dale and Lassie have been fed alike since I owned them, as follows:

Last winter, she was fed on hay and roots; on pleasant days, only, was in the yard most of the time; this summer she has been in the field during the day, and at night, in the barn or yard; has been fed, night and morning, with either winter-rye, oats, or corn fodder, cut green. My pasturage amounts to little or nothing, at present.

Believing that I have hereby complied with the requirements, I submit them to your judgment.

I also enter my yearling Ayrshire Heifer, "Lady Essex," 1413. For age, etc., see printed pedigree (in Catalogue) herewith.

### STATEMENT OF HENRY SALTONSTALL.

To the Committee on Jersey Cattle of the Essex Agricultural Society.—*Gentlemen:*—I beg leave to com-

mend to your favorable notice, my thoroughbred Jersey bull calf, "Governor." Being but ten months old, he cannot be entered for premium, and is sent for exhibition only.

His sire, Ceur de Lin, and dam, Diamond, were both selected and extra cost animals. Bought in the Island of Jersey by Thomas Motley, Esq., and imported by Steamer St. Laureat, in June, 1868. Diamond was bought and imported for, and is owned, by me. Ceur de Lin is the property of Benjamin E. Bates, Esq., of Watertown.

Both are entered in the Herd Register of the American Jersey Cattle Club, Nos. 318 and 570.

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## WORKING OXEN AND STEERS.

The Committee on Working Oxen report: That there were seven entries of working oxen, six of which put in an appearance, and went to trial; and it *was* a trial, such as your Committee hope they will never be called on to witness again, here or elsewhere. The load was two thousand pounds, exclusive of the wagon, the hill the hardest in the county, and the oxen averaging twenty-eight hundred lbs. per pair, made a very badly proportioned thing of the whole affair.

Every ox did his best, and a few pairs of the heaviest cattle found the top of the hill; but the lighter grade will "die without the sight."

In the name of humanity, in the name of everything that is good and holy, your Committee would embrace this opportunity to enter their protest against cruelty to dumb animals.

Awards on working oxen from five to eight years old:

To George Hodgsdon, of Ipswich, first premium, diploma and $12.

To R. S. Bray, of Newbury, second premium, $10.

To William Foster, North Andover, third premium, $8.

Special premium, by Dr. Geo. B. Loring, for the best teamster:

To R. S. Bray, of Newbury, premium of $10.

Steers four years old:

To R. S. Bray, of Newbury, diploma and $8.

To Chas. J. Peabody, Topsfield, second premium of $5.

Committee—A. W. Smith, J. Longfellow, W. B. Morgan, A. B. Fellows.

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## STEERS.

The Committee on Steers report: The whole number of steers entered for premium, was six pairs, four pairs of three-year-olds, one pair of two-year-olds, and one pair of yearlings.

We have awarded premiums as follows:

For three-year-olds, first premium of $6, to Romulus Jaques, of West Newbury, and the second premium of $5 to Dr. Joseph Kittredge, of North Andover.

For two-year-olds, second premium of $4, Moses Colman, Newbury.

For yearling steers, first premium of $4, to Hiram Young, Newbury.

Committee—Israel Herrick, Adoniram Porter, George A. Dodge, George Hodgsdon.

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## STALLIONS.

The Committee on Stallions, four years old and upwards, present the following as their report for the exhibition of the Essex County Agricultural Society, held at Ipswich, Mass., Sept. 26th and 27th, 1871:

There were offered for the examination of the Committee,

only three stallions of four years old and upwards, as follows, viz :

"Hamilton Boy," by Francis Dane, of Hamilton.

"Gray Prince," by E. Battelle, of Newburyport.

"Blue Jacket," by G. W. Rogers, of Salem,

The first premium of $15 and diploma was awarded to "*Hamilton Boy.*"

The second premium of $10 was given to "*Gray Prince.*"

The stallion "Blue Jacket," though a fine, well-bred and valuable stock horse, having been owned by Mr. Rogers but a few weeks, was not, by the rules of the Society, entitled to any premium. The committee, therefore, deemed it well to suggest the propriety of giving to Mr. Battelle, the owner of the stallion "Gray Prince," a gratuity of $5, as the third premium of $8 was not appropriated by them. In the class of stallions of three years old, one colt only, was offered, and that by Francis Dane, Esq., of Hamilton, to whom was awarded the first premium of $8, leaving a balance to the Society, even if the suggestion of the Committee be thought advisable, of $5.

We very much regret so few horses were presented. It may be accounted for by the small amount of premiums offered. If an exhibitor be a man of wealth, the idea of small premiums avails nothing; but in the case of the majority of contributors at our Fairs, the rearing of a colt to be four years of age, is so great, that a premium is quite an object to be sought for, and the efforts made to obtain the first award of the Society, would make it pay for a larger number of contributors to contend for the prizes, with the hope of getting them to defray, not of course, the expense of wholly rearing their animals, but their expenses during the exhibition.

The Committee wish it was a standing and published regulation of the Society, compelling each contributor, on presenting his stallion for entry at the Fair, to give, at the same time, a written pedigree of his animals, and one that can be thoroughly vouched for, it being of great importance in awarding

premiums, that it may be said by the gentlemen authorized by the Society to examine them, that their award assures the people of the county of the value of the horses for stock purposes.

Another idea of importance which not only met with the wishes of the Committee, but must also all contributors of first class stock, is the necessity of having close pens, not only to protect the animals from the inclemency of the weather, often quite severe at the period of our exhibitions, but also that they may not be endangered by their neighbors, whilst standing in the pens as they are now obliged to do.

The Committee would also advise the classifying the horses: for instance: in the exhibition of this year, the stallions of Messrs. Dane and Rogers were, beyond comparison, the best stock horses for gentlemen's driving purposes, whilst the horse of Mr. Battelle, though of great value for the ordinary work of the farm, was useless for fast work on the road. If a classification is made by the Society, or left at the discretion of the Committee, it would not only much assist them in their labor but give greater satisfaction to contributors.

The committee hope to see a much larger exhibition of stallions another year, and also particular attention given by owners, to establish beyond a doubt, the pedigree of their stock, which, however, was given in a few cases this year.

Chairman for the Committee—Samuel C. Oliver.

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## BREEDING MARES.

The Committee award as follows:

To M. O'Shea, of Salem, first premium, diploma and $15.

To S. C. Oliver, of Salem, second premium, $10.

For the Committee—Alvin Smith.

## FAMILY HORSES.

The Committee award the first premium of diploma and $15, to George W. Rogers, Salem.

Second premium of $10, to O. S. Butler, Georgetown.

Third premium of $8, to Edward H. Little, Newbury, for his horse "*Tom.*"

For the Committee—Daniel F. Appleton.

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## FARM AND DRAFT HORSES.

The Committee on Farm and Draft Horses, report as follows the list of premiums:

P. Holt, North Andover, first premium, diploma and $12.

J. F. Dane, Hamilton, second premium, $10,

W. C. Langley, Newbury, third premium $8.

S. A. Merrill, Danvers, fourth premium, $5.

And the best teamster, Sylvester Dane, of Hamilton, special premium, by Dr. Loring, $10.

Committee—T. G. Ordway, Amos Pratt, Wm. B. Russell.

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## COLTS.

The Committee on Colts have attended to their duty, and awarded the following premiums:

The first premium of $10 and diploma, to Geo. W. Rogers of Salem, for his four year old colt.

Second premium to Theodore Holman, of Salem, $6.

Third premium of $4, to John Swinerton, of Danvers.

### Three Year Old Colts.

First premium of $8 to Geo. B. Martin, of Danvers, for his colt, "Lady Linn."

Second premium, to Geo. B. Martin, of Danvers, for his "Danvers Girl," $4.

### Two Year Old Colts.

The First premium of $6, to Jacob Rhoades, of Lynn, for his two year old stallion colt.

Second premium of $2, to be divided between Geo. B. Martin, of Danvers, for his "Lady Jennette," and S. B. Gregory, Hamilton, for his stallion colt.

### One Year Old Colts.

First premium of $6, to Ashael H. Patch, of Hamilton, for his yearling colt.

Second premium of $2, to F. Dane, Hamilton, for his yearling colt.

The Committee noticed a very promising four year old Percheron colt, on exhibition by F. Dane, but not entered for premium.

There was a large number of very likely, promising colts entered, and the Committee are sorry they could not have had more premiums at their control, to award to them.

Committee—David Stiles, C. H. Gould, Eben King, D. A. Pettingill.

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## SWINE.

The hog does not hold so important a position among our domestic animals, as he did forty years since. Then the sale of pork formed an important item for the farmers of this county. Now we cannot successfully compete with the West in raising

pork. Then the hog was used to consume the whey and skimmed milk of our dairies. Now a large part of the milk is sold.

Before the potato rot appeared, they were extensively used in many places for feeding swine; their market value now is too great for that purpose.

We think that Indian corn can not now be profitably grown for feeding swine by the farmers of this county, except by a few such men as Dr. J. H. Nichols, who have discovered the secret of growing it without animal manure; yet still we think that a small number of pigs may be economically kept upon our farms. They will in part, live upon the refuse of the kitchen, and things that would otherwise be lost. The hog, in his way, is a disorganizer; give him the tough tassocks of our bog meadows, and he delights in tearing their matted roots apart. We can turn this propensity of the hog to some practical advantage, if we keep his sty well supplied with vegetable matter which he will convert into good manure.

It is not well to put loam or any fine soil into his pen, for it soon becomes a compact mass; but if we give him some organic matter, he will keep it in motion until he makes it good food for plants.

None of those who have entered their swine for premium, have given us any estimate of the cost of growing a pound of pork. In published statistics upon this subject, we find it estimated that a bushel of corn meal will make seven pounds of pork, in others that it made forty pounds. We think that the smaller estimate is much nearer the average If we allow a bushel of meal to make 8 lbs. of pork, and estimate the manure to pay for the labor of feeding, we can approximate to the cost of making pork.

The Committee were unanimous in awarding the first premium and diploma to

Penny and Ash, of Saugus, for their improved Chester Boar. We think this should have been called a *grade Chester*,

as it had the appearance of the cross of the Chester with some smaller breed.

The Committee, acting upon the instruction given, "That no premium should be given, unless the object was of a decidedly superior quality," did not think that any animal was entitled to the second premium.

They award the first premium and diploma to Henry Saltonstall, of Peabody, for his breeding sow.

The second premium to Joseph F. Dane, of Hamilton.

For the best litter of weaned pigs, they award the first premium of $5 to Henry Saltonstall, of Peabody.

The second to Wm. Foster, of North Andover.

Committee—Wm. R. Putnam,, James T. Carleton, John Lee, J. F. Knowlton, Jasper Rea.

## STATEMENT OF HENRY SALTONSTALL.

To the Committee on Swine, of the Essex Agricultural Society.—*Gentlemen:*—The Yorkshire sow, "Meg Merrilies," entered by me for the Society's premium for the best breeding sow, was imported in January, 1870, by ship "H. D. Storer," from Liverpool. She was sired in England, imported in dam, and dropped two months after arrival of the vessel, March, 1870. She has been owned by me since she was three months old.

She is thoroughbred, easily kept and fattened, gentle, a good mother, and perfectly healthy.

She has had one litter of eleven pigs, one of which was killed accidentally, one has been sold, and the remaining nine are entered as per next page. She is thin in flesh at this time, because she has so lately weaned a heavy litter of pigs.

I enter for exhibition—having obtained first premium at last year's Show—the imported English White Boar "Captain Jinks," two years old.

The boar was purchased by Thomas Motley, Esq., for me,

from Peter Eden, one of the most celebrated prize takers and breeders in England. Mr. Eden refused Mr. Motley's offer of thirty guineas, or $150 gold for any one of the sow pigs of the same litter, eight weeks old.

These English white pigs, as the Committee are doubtless aware, are bred from Suffolk, Yorkshire, and others of the best English breeds, to combine their excellencies, and produce a pig of good size, very small proportion of offal, small bones, and great tendency to fatten. They have been bred long enough to make a distinct breed, and are much prized in England.

This boar is fed but once a day, from the leavings of the house.

I also enter for the Society's premium, for the best litter of weaned pigs, nine pigs two and a half months old, from the imported Yorkshire sow, "Meg Merrilies", by my imported English white boar, "Captain Jinks."

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## SHEEP.

The Committee award to
D. F. Appleton, best flock, first, diploma and $8.
Francis Dane, second, $5.
B. D. Appleton, best buck, diploma and $6.
D. F. Appleton, lambs, $3.
Committee—D. Bradstreet, R. Jaques, N. W. Moody.

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## POULTRY.

Your Committee are pleased to be able to report that the display of poultry at the recent fair, was very fine; better in quality than was ever before exhibited at any fair in Essex

County. It is a matter of fact, that this display of fine fowls was a prominent feature in the show; and no one thing attracted more notice from the assembled multitude. Why not attract notice? These fowls are strongly associated with all the comforts of life: with the bed on which we sleep, with all our social festivals, with the dainty meats of our Society's dinner, and the puddings, the custards, the cakes, and even the good old fashioned pumpkin pies of every day life. We would suggest to the farmers in this county, the propriety of exterminating all those puny, ill-looking, mixed up fowls, seen hovering round the doors of so many of our good barns, and filling their places with some of those beautiful birds, exhibited E. K. Perkins, D. B. Wallace, H. C. Fegan, and a number of others. Fowls that will adorn their premises, spread their tables with luxuries and fill their market baskets with profit.

We would also suggest to the Society, the propriety of encouraging the breeding of these choice fowls among farmers, by placing them on the same footing, with regard to the premiums, with the cow, the horse, and the swine; And your Committee can see no good reason why three premiums should not be offered on each class of fowls, as well as on these animals, or anything else that goes to make up the show.

Why not weigh the produce of the cow, in the scale of domestic economy, with the produce of a flock of fowls, and give to each its due in dispensing premiums? Why not place the good dinners which fowls give us by the side of the good rides which we get after our fast horses, and give to each its due?

We can see no reason why the breeding of choice fowls should not be encouraged among farmers, until every valuable species be introduced into the county, and every farm yard have its choice flocks, until eggs are abundant, and the market liberally supplied with good poultry. I have bred all the choice breeds with success, for the past ten years, and have found by actual experiment that the breeds which I will mention below, are the most profitable for the farmers to keep.

The Brahmas and Cochins, we esteem in all respects the best suited to the wants of farmers who are obliged to keep their fowls confined.

But where there is ample room, the Dominique, Leghorn, and Plymouth Rock, will far surpass all others that I have ever bred. And for the fancy farmer, who prides himself on his Jerseys, and his Ayrshires, we would recommend the Hamburghs, Polish, and Game; and last of all, the Bantams, which will give profits to his tables, and warning to his sluggish risers.

The Committee award as follows:

Light Brahmas, first premium, H. C. Fegan, $3,
Second do, J. S. Ives, Salem, $1.
Dark Brahmas, first premium, E. R. Perkins, Salem, $3.
Second do, Mrs. G. L. Streeter, Salem, $1.
Buff Cochins, first premium, H. C. Fegan, Groveland, $3.
Second do, E. R. Perkins, $1.
Partridge Cochin, first, E. R. Perkins, $3.
Second, Mrs. G. L. Streeter, $1.
Black Chochins, first premium, E. R. Perkins, $2.
Second, Mrs. G. L. Streeter, $1.
Dominique, first premium, E. R. Perkins, $2.
Second, George W. Knight, Newburyport, $1.
Black Spanish, first premium, D. B. Wallace, $2.
Leghorn, first premium, E. R. Perkins, $2.
Hamburghs, first premium, A. N. Plouff, Ipswich, $2.
Polish, first premium, E. R. Perkins, $2.
Game, first premium, C. H. Richardson, $2.
Bantams, first, premium, J. S. Ives, $2.
Ducks, first, premium, E. E. Bartlett, Newburyport, $2.
Geese, first premium, Joseph Horton, Ipswich, $2.
H. C. Fegan, Groveland, one pair Black Cochins, gratuity. $1.
O. F. Putnam, Danvers, Wild Geese, do, $2.
L. M. Locke, Salem, gratuity on coop of Pigeons, .50.
D. B. Wallis, Peabody, trio of Sicilian Chickens, $1.

E. R. Perkins, Salem, Ducks, $1.

E. R. Perkins, trio Houdans, $1.

E. R. Perkins, do White Cochins, $1.

Committee—John Swinerton, John I. Ladd, C. H. Ordway.

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## PLOUGHING—DOUBLE TEAMS.

The Committee on Ploughing with Double Teams, have attended to their duty, and would report the following awards:

To R. T. Jaques and R. S. Bray, of Newbury, the first premium of diploma and $12.

To J. and D. L. Goodrich, West Newbury, the second premium, $10.

To Joseph Horton, of Ipswich, the third premium of $9.

The ploughs used were of the same pattern, Eagle, No. 20.

Committee—Sherman Nelson, John G. Little, Wm. B. Morgan.

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## PLOUGHING WITH SINGLE TEAMS.

The Committee award as follows:

To R. T. Jaques, of Newbury, first premium, diploma and $10.

To George Hodgsdon, of Ipswich, second premium, $7.

Committee—Philip Jones, Geo. A. Abbott, John Brown.

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## PLOUGHING—SWIVEL PLOUGH.

The Committee award to William Foster, of North Andover, the second premium of $10.

To Eli C. Rankin, of Beverly, the fourth premium, $5.

Committee—Aaron Low, Geo. W. Sanborn, Joshua N. Kent.

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## PLOUGHING—BY BOYS.

There were but two entries for Boys on Ploughing, one did not appear.

Willie Horton, of Ipswich, aged 15 years, plowed with Doe Plow, 7 inches deep, and performed work in one hour in workmanlike manner, and gave perfect satisfaction to the Committee, and they have awarded to him the first premium of $25.

Committee—Aaron Dodge, Calvin Rodgers, J. P. King, Joseph Longfellow.

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## AGRICULTURAL IMPLEMENTS.

The display of articles entered under the head of Agricultural Implements was not quite as good as usual, owing, perhaps, to the fact that several other fairs in our vicinity opened upon the same date.

There were twelve exhibitors, the largest of whom were Whittemore, Belcher, & Co., and E. E. Lummus, both of Boston. They offered the leading articles of their establishments. Although there were several implements and machines in each of the above collections that are well known and approved, the Committee did not think that there was that decided excellence, as a whole, that would entitle either of these exhibitors to the premium of $15, offered by your Society, for the best collection of implements and machines.

Aaron Dodge, of Beverly, exhibited Nashwitz's Pat. Pulverizing Harrow. This is an excellent harrow, and the only

objections the Committee could bring against it, were its high price, $30, and its liability to wear. Even with these objections, it will doubtless have a very extensive sale throughout the country.

The "Advance" mower, by the same exhibitor, is not as simple in its construction as some other mowers; it has some advantage, however, in the method of raising the cutter-bar; and more than one of the Committee can testify as to its capability of doing good work in the field.

Whittemore, Belcher & Co. exhibited the "Wood" Mower. The manufacturers of this favorite machine have made a "new departure" in the use of an *iron* frame. How far this change may be a real improvement, a season's use will determine. The "Wood" was the pioneer among light, cheap mowers, and through all its modifications has proved itself among the very best. The machine on exhibition was very simple, compact, and put together with the smallest possible number of bolts. Among its faults the Committee noticed the use of a *round* bolt with a *round* head for holding the leading wheel to the inside shoe. Such bolts are an abomination to farmers.

Among the articles exhibited by Whittemore, Belcher & Co. and deserving mention, were the well known "Doe" Plows. Also a cylindrical Hay, Straw and Stalk Cutter. This was not shown to the Committee in operation, nor its price given, but it had the appearance of being a very strong and effective machine. The Blanchard Churn is a standard article. The best materials are used in its construction and its price is reasonable.

Buchan's Patent Carbolic Soaps and disinfectants for which W. B. & Co. are agents, are made in several different styles and for distinct purposes. They are adapted for use from the toilet to the farm yard, and the constantly increasing demand for these preparations show that they possess merit.

Among the articles exhibited by E. E. Lummus, of Boston, was a Swivel Plow of a new pattern, which Mr. L. desired to test in presence of the Committee. There was some difficulty,

however, in procuring a team for the purpose and the trial was omitted.

Mr. Lummus exhibited a "Sulky Horse Rake," (Hollingsworth's patent,) which appeared to be a splendid article. The method of attaching the teeth is extremely simple and effective. There was combined with this rake a Grass-seed Sower—this extra attachment costing $10—the price of the Rake being $45. The Grass-seed Sower was not shown in operation, but the Committee thought it worthy the attention of our large farmers.

Mr. Lummus also exhibited a very light, strong, nicely operating Horse Hoe. The frame is made of bars of wrought iron, curved to the ground, when they receive flat plates of steel. In operation it cuts over the entire surface of the ground—leaving it well pulverized and level. It is highly recommended by several farmers who have used it, and who are well known by your Committee.

Mr. Lummus exhibited a "Lever" Straw Cutter, price $8, that operated well, and is easily kept in order. It is one of the best articles of this class that has ever come to the notice of the Committee. Owing to the short crop of hay, machines of this kind are in greater demand than usual. They are equally adapted for cutting hay, straw or corn-stalks.

Mr. Lummus also exhibited a Hay Tedder, price $50, being much less than other machines are sold for. The motion of the forks for throwing up the hay seems very much the same as in the "Bullard." It is lighter and more compact than its neighbor. It is, however, a new machine, and the Committee could express no opinion as to its comparative merits. It is worth the attention of all who intend purchasing a Hay Tedder.

Mr. Lummus exhibited a Horse Hay Fork, which appears to be a good article.

The "Eureka" Mower, exhibited by J. F. Kinsman, is a novelty in its line, the cutting being done directly behind the horses. It is probably the only machine made upon this plan that has met with any success. The machine is large and

heavy, but it cuts a very wide swarth—the draft being so direct, it is claimed, that it runs easier in proportion to the work done than any of the common side-draft mowers. It will have to be reduced very much in size before the farmers of *our* State will buy it to any extent. Manufacturers of the common style mowers do not consider the "Eureka" a very strong rival. It is possible that it may become so.

C. C. Holt, of Lawrence, exhibited a Horse Rake, designed to be self-operating. The slightest pressure of the foot of the driver engages the head of the Rake with a geer wheel, and raises the teeth to discharge their load. It is somewhat complicated and may not be as durable as the machines operated by the main strength of the driver. It is worth an examination by all who are interested in raking hay by horse power.

Webster Smith, of Ipswich, exhibited an Ox Wagon—complete in every respect—a perfect model in its proportions and workmanship. Even our manufacturers of agricultural implements might examine this piece of work with advantage. This wagon, like others made in this vicinity, is especially designed for carrying hay—and probably in no other part of the country can such large, evenly laid, handsome loads of hay be seen as are hauled to Boston from Essex County upon these Ipswich hay wagons.

W. E. Barrett & Co., Providence, R. I., exhibited the "Sprague" Mower. The machine offered being their one-horse mower, weight 450 lbs.—price $85. This machine is comparatively a new one, and has not been used in this county to any considerable extent. It appeared to be a first class machine—light, compact and easily operated. It is understood that its manufacturers placed it upon the market at a somewhat lower price than other machines had been held at—and that this course has had the effect of reducing prices generally.

The Committee noticed a fault in the great liability of the pitman to strike any obstructions in its path. The machine deserves the examination of all who intend buying a mower.

For the Committee—A. H. Patch.

## PLOUGHING WITH HORSES.

The Committee on Ploughing with Horses have attended to the duty assigned them, and respectfully submit the following report :—

Teams Presented.—Peter Holt, North Andover; Edward H. Little, Newbury: Samuel A. Merrill, Danvers: Wm. Thurlow, Newbury; Moody S. Dole, Georgetown: Edwin C. Little, Newbury; Eustace Balch, Groveland.

There were eight entries, seven of which competed for premium. After careful observation, the Committee unanimously award to Eustace Balch, of Groveland, the first premium of diploma and $10. Plough, Doe No. 4. Time, 32 minutes.

To Edwin C. Little, of Newbury, second premium of $7. Plough, Prouty & Mears, No. 154. Time, 35 minutes.

To Edward H. Little, Newbury, third premium of $4. Plough, Mohawk Valley, No. 2. Time, 34 minutes.

The ground selected for the Ploughing Match was of rather an uneven surface, particularly that part assigned to the Horse Teams, the lower side, bordering on the river, being covered with a thick growth of tanzy and couch (or more commonly called dog) grass, requiring much skill from the ploughman and strength from the team. We were pleased to see with what ease and comfort the ploughing was performed both by man and beast. We also commend them much for their coolness and length of time in performing the work assigned them. The work done by the teams of Samuel A. Merrill of Danvers, Peter Holt of North Andover, and Edward H. Little of Newbury, differed but little in point of workmanship, making it somewhat difficult in judging to whom the premium of four dollars belonged. The Committee very much regret there were not more premiums offered in this department, and were we not debarred by the rules of the Society, would recommend gratuities to all competitors. We were highly pleased to find upon the ground so many good and valuable horse-teams for ploughing. It is many years since so large a number have

competed for premiums at one trial. We hope the Society will in future offer more and larger premiums in this department, that it may not only stimulate our young men, but the practical farmer to renewed endeavors in this direction. The history of the horse can hardly fail to interest the most careless student. From the earliest ages he has been man's faithful ally and willing slave. Every branch of industry owes much to his patient toil; he ploughs the soil, sows the seed, reaps the harvest and transports it to the distant market. From year to year he has toiled unceasingly for his master, in the cart, the mill, the freight-wagon or the mail-coach. In gracefulness of motion, elegance of form and dignity of carriage he is superior to every other quadruped; and by those nations to whom he is known, he is almost universally considered the most useful and manageable of all our domestic animals. Although the horse was domesticated in the time of Moses, yet we know little of his condition or the manner in which he was trained, until within a little more than two thousand years. But our agricultural methods are still rude, and must be considered so while the plough is the symbol of agriculture. We can look back and see the first cultivator of the soil, a naked savage, who tries the first agricultural experiment by making a hole with his finger in the mud left by the overflowing waters of some river, and depositing a grain of wild corn. How he grins, on his return, to see the success of his experiment in the silken tassel, and eventually in the golden ears! He tries again; but finding his forefinger sore from use, he improves on this by using a stick to dibble in the grain, and thus invents the first agricultural tool. A stone hatchet hews out the first rude spade, and with this wooden spade the work goes bravely on. We look down the stream of time and see the wooden spade disappear, and a stick pulled by an ox take its place; then follows the Saxon peasant, with his wooden plough zig-zagging over the ground, scattering his grain and reaping his scanty harvest, but thinking, poor soul! that never was there such an invention as his plough. What can possibly supercede

it? Here comes the Yankee farmer with his steel plough and splendid team, turning over the broad furrow to the sun's eye, then with the harrow mellowing the rich soil, and with a drill sowing his grain in parallel rows; he fills his barns with plenty, and exclaims, Where is the man who can improve upon this? He is already born. Here comes on the great steam pulverizer, which shall supercede the plough as surely as the plough superceded the rough-hewn spade of the savage, stirring up the ground to the depth of two or three feet, and making it all as fine as the finest garden-mould. Then comes the steam dibbler, planting every grain at an exact distance from every other; not one here and one there, as at present—like the plums in a miser's pudding, or crowded together like the dollars in his bags—but springing up and standing like the chessmen on a board, with room enough to tiller out on every side.

Committee—A. B. Fellows, Ipswich; H. W. Foster, Beverly; A. M. Bodwell, Lawrence; J. L. Newhall, Newburyport; T. K. Leach, Topsfield.

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## CARRIAGES.

The Committee regret that the appropriation for Carriages was only ten dollars and a diploma. There were six Carriages entered for premium—five Wagons and a Phæton—most of them of superior workmanship and worthy of the whole amount set apart for this department of the exhibition. The awards are:

Five dollars and the diploma to Osgood Bros. of Georgetown, for an elegant Phæton.

Three dollars to Pike & Whipple, Peabody, for a very superior Milk Wagon.

Three dollars to C. W. Chapman, Ipswich, for Family Wagon.

Two dollars gratuity to Bradley & Clark, Wenham, for Covered Wagon.

Gratuity of two dollars to Dean & White, Georgetown, for Two-seated Wagon.

Two dollars to Wm. Noyes, Newburyport, for Wagon made with one hand.

Committee—W. Ordway, O. S. Butler, James Wilson, Willis P. Sargent.

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One of the best indications of a good farmer is the possession of a good team, and it is almost always the case that where a good farm or market-wagon is found, good oxen and horses are found to go with them. The same remark is in a measure true when applied to the lighter carriages for family use. Essex County has occupied a prominent position since the Revolution for the early introduction of the manufacture of carriages, combs and boots and shoes. The people of the American Colonies had been dependent upon the mother country for their manufactures, excepting those of the most simple and ordinary character, until the puritanical principles of free grace and free agency brought them up into the atmosphere of independent thought and action, and finally to free suffrage. In no department of mechanical labor can greater improvement be shown, or the versatility of American genius be more fully demonstrated, than a history of the vehicles of the county will reveal. The colonial pleasure-carriage was a swing-cart, with two wheels, wooden axle, strip tire, short boxes and linch-pins; hung upon thorough braces attached to wooden springs, both in front and behind, and painted with the inevitable Spanish brown. These carts, with the ox-carts, which were universally used for farm purposes, were made by joiners and sometimes by the farmers themselves. The roads were merely bridle paths, running around upon the margin of the low lands and over the highest hills. Long journeys were made on horseback, with pillion or saddle-bags, as circumstances required. A few carriages were imported for government officials and some of the most aristocratic families of Boston and perhaps Salem. In the year 1777, Nathaniel Greenleaf, of Newbury,

now West Newbury, got up the first chaise that was manufactured in the valley of the Merrimac River, and probably in Essex County. He was assisted by an Englishman, a deserter from the army and a chaise-body maker by trade. It was purchased by Hon. Theophilus Parsons, of Newburyport, and was the first chaise that was owned in that then aristocratic town. The rapid increase of wealth in the seaport towns of New England after the war gave an impetus to the business, and orders for the "*one horse shay*" came from Maine and New Hampshire, and some were sent with the other staple productions of the county—shoes and tow cloth—to Charleston, S. C. Everybody went to meeting on Sunday and lecture day, without regard to the weather. For those who lived remote from the meeting-house and were able to buy one, a chaise was considered a luxury that it was not wicked to possess. In twenty years after the war it had become the leading mechanical business of Essex County. It was carried on extensively in Newbury, now West Newbury, in Belleville, in Amesbury, Haverhill, Bradford, Rowley, Salem and Beverly. The business involved so many different trades that a system of exchange, or barter trade, was adopted by those who were engaged in it. This opened the way for shoemakers, storekeepers, hatters and even farmers to dabble in it, as the most available method of turning the proceeds of their own industry into cash. This barter system of manufacturing and the expenses incident to dragging them around the country for sale, eventually rendered the carriage business unprofitable, and it gradually gave place, in all these Essex towns but Amesbury and Salisbury, to the more extensive and profitable demands of the shoe and leather trade. During the last seventy years great improvements have been made in the style and in the mode of manufacturing carriages. Four-wheeled vehicles have been introduced in all their multiplied forms. The turned axle and pipe box, the eliptic spring and hoop tire, patent and enameled leather, and recently steel and iron, have been largely substituted for wood, which, taken in connection with the saving of labor by the use

of machinery and steam power, have worked an entire revolution in the trade. The mode of selling is also changed. Depositories have been established in all the principal cities of the country, and the trade is now conducted upon the most approved mercantile principles. The well known energy and enterprise of the gentlemen who are engaged in this business in Essex County, and the large amount of capital they employ makes the prospect for the future most encouraging.

For the Committee—Warren Ordway.

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## DAIRY.

There were twelve specimens of Butter entered for premium, and the most of it was of superior quality.

Francis Dane, of Hamilton, presented 20 lbs. of Butter made from his Jersey Cows. It was of good color and of superior quality. The Committee would recommend that he receive the 1st premium, diploma and $10.

To Oliver Patch, of Hamilton, 2d premium, $8.

To Clarissa S. Caldwell, of Ipswich, 3d premium, $6.

To J. C. Underhill, of Peabody, 4th premium, $4.

The second premium would have been given to another, had there been a statement accompanying the specimen as the rules require.

Lucy Marshall, of Ipswich, presented a specimen of Cheese, to whom the Committee would recommend the 2d premium of $5.

After deciding on the several premiums, your Committee (being most of them men of long experience in keeping cows and making butter,) had an interesting discussion on the subject, and were happily united in their opinion on almost every point, and requested their chairman to make a report and affix their signatures to the same.

On examining the reports of former years we find a great similarity of opinion on the subject. But as the persons whose

names have long been on our records as experts in butter-making are passing away and younger persons are taking their places, who are looking to our reports for information, it seems necessary that new reports should be made from time to time, to supply the wants of our ever changing community.

The dairy in its different forms holds a prominent place among the farmers of Essex, and most of the producers near our cities and large villages sell their milk and make but little or no butter and cheese. That a dairy may be profitable, good cows are indispensable. If the milk is designed for butter, the quality as well as the quantity should be considered, and that such information may be had the milk from each cow should be set and churned separately; otherwise a cow that gives a large quantity of poor milk may be kept for years unprofitably to the owner and not be known.

How to get extra cows is a problem difficult to solve, as most persons are not willing to sell their best cows at a reasonable price. Mr. Dane's premium butter highly recommends the Jersey cows, but as to the quantity made we are not informed.

Good keeping is necessary, as it has much to do with the quality as well as the quantity of milk. Pastures with a large portion of white clover furnish good feed in summer. The most of our pastures soon grow dry and the feed short, then the question is what shall be used as extra feed.

Your Committee were unanimously of the opinion—having had many years of experience and careful observation—that green corn fodder is the best article that can be used, taking into consideration its value for food, and the ease with which it can be raised.

The writer tried an experiment several years ago which was substantially as follows:

Four cows were selected from his herd when his pastures were parched with excessive drought. Two of them were fed night and morning with green corn-stalks, as much as they would eat. The other two were fed with English hay of me-

dium quality, as much as they would eat, all going in the same pasture during the day. Their milk was carefully measured. After about two weeks their feed was changed; those that had been fed on corn were fed with hay, and those that had been fed on hay were fed with corn, for about two weeks longer, and the milk carefully measured. The result was nearly the same. There was no perceptible difference in the quantity of milk produced when fed on green corn fodder or English hay.

The above experiment shows that it is much more profitable feeding on green corn fodder than on hay, as it costs much less.

Turnips are sometimes used in fall and winter, but if cows are fed freely on them it will sometimes give an unpleasant flavor to the milk. Feeding freely on salt hay will sometimes have the same effect.

An animal that was designed for beef broke into a field and eat freely of onions. It was soon slaughtered and the beef was highly flavored with onion, which would be unpalatable to most persons. Had it been a cow in milk, it would have been likely to have had the same influence on the milk and butter.

Pumpkins are good feed for cows, but one of your Committee expressed the opinion that the seeds were injurious and should not be fed to them.

Beets or mangolds will produce sweet milk, but not add to its richness. Feeding on carrots will produce a richer quality of milk than beets. We have seen a superior quality of rich yellow butter made in winter from cows fed largely on carrots.

Indian meal fed to cows will make rich milk, but not add much to the quantity. Feeding on shorts will increase the milk in quantity, but not much in quality.

We think that corn fodder should not be used until it has nearly reached its growth, in the blossom, as it then possesses more nutriment than when cut earlier; and we also think that it should not be sowed or planted too thick, as it often lodges, which depreciates its value; or if it does not lodge it grows in the shade, without the influence of the sun, which influence is

necessary to make it nutritious. Every fruit-grower knows that fruit which grows in the sun is much better than that which grows in the shade. The same principle will hold good with most kinds of vegetation.

Having procured good cows and rich milk, a good dairy-room or place to set the milk is indispensable. It is not uncommon for milk in warm weather to sour before the cream has all risen.

The temperature of the dairy-room should range if possible from 50° to 60°, and the cream when churned from 55° to 60°.

In most cases a basement or room partly under ground is convenient, as it can more easily be kept cool. It should be well ventilated and not dark.

Ice may sometimes be kept in the room to good advantage, as it is desirable that the milk should cool as quickly as possible after it is drawn. We should recommend slats to set the pans on, or what is still better, iron rods. The room, with all its implements, should be kept sweet and clean, and nothing of an unsavory odor should be kept therein.

In regard to the process of making the butter, we would refer to the statements of those who receive the premiums. It will be noticed in those statements that a difference of opinion exists in regard to rinsing the butter in cold water when taken from the churn. Some say it is necessary; others have a different opinion. We are of the opinion that it makes but little difference, providing the buttermilk is all worked out.

### STATEMENT OF FRANCIS DANE.

Hamilton, Sept. 26th, 1871.

To the Committee on Dairy,—*Gentlemen*:—I offer for premium twenty lbs. Butter.

This box of September Butter, containing 20 lbs., was made from the milk of Jersey cows. It was allowed to stand 24 hours, then the cream was taken off and stirred twice a day,

until churned, which takes from eight to ten minutes. Then the butter is taken from the churn and worked by clappers, and salted one ounce to the pound. After twelve hours, worked again and formed as presented for premium.

## STATEMENT OF OLIVER PATCH.

To the Committee on Dairy:—I present for premium 19 lbs. of Butter, made last week from the milk of two cows (of the Galloway or Buffalo breed) and one two-year-old heifer. Their feed has been only pasture and corn-fodder—no grain, meal, or roots. *Process of Making.*—Strain the milk into tin pans, having it on an average about three inches deep. Let it stand from 24 to 48 hours, according to the weather—(last week it stood forty-eight hours,) — always being careful to skim the cream before the milk turns. Stir the cream daily, adding to it a little salt, and churn usually once a week. Add about a pint of cold water to the cream at churning, as it churns easier and comes quicker. Never wash the butter in cold water, or put water to it after it comes. Salt it to suit the taste, generally about an ounce to the pound. Let it stand over night, then work it over, weigh it out into pound lumps ready for market, in the same shape in which it is to-day offered for premium.

## STATEMENT OF C. S. CALDWELL.

I offer 16 lbs. Butter, made at two churnings, in September. The method of making is not new, I presume.

The milk stands 24 or 36 hours before skimming; the cream stirred daily, and in summer keep it but three or four days longer in cool weather.

When the butter is taken from the churn, it is hard and waxy; put immediately into a large pan of ice-water and worked until *all* the buttermilk disappears. Then salted and

set by 24 hours, when it is broken up, worked over and molded, or packed solid in firkins.

### STATEMENT OF J. C. UNDERHILL.

Process of Making Butter.—Strain into each pan between two and three quarts of milk; when thirty-six hours old skim, taking as little milk as possible with the cream. Keep both, cream and milk, exposed to light and air. Stir the collected cream whenever new is added, to keep it sweet. In warm weather churn twice, and in cool weather once a week.

When the churning is done and butter is gathered, draw off buttermilk and quickly rinse the butter with a little cold water and work out buttermilk. Use one ounce of salt to a pound of butter and one table-spoonful of pulverized loaf sugar to ten pounds of butter. Let it stand twenty-four hours, work thoroughly, and mould.

### STATEMENT OF LUCY MARSHALL.

I present for your examination four new-milk Cheeses, made in the month of August, in the following manner: At night the milk is strained into a tub and rennet added sufficient to bring it to a curd in about half an hour; it is then gently broken with the hand, drained, sliced several times and left to stand until morning, then sliced again, the morning's milk strained upon it, and the process of the previous evening repeated. The curd is then put in a stone jar, without salt, and placed in the cellar; the same process is repeated with the next night's and morning's milk. The curds are then mixed, scalded with whey, broken with the hands or ground in a curd mill, salted to taste, and pressed. One is a sage cheese.

Committee—Joseph How, M. I. George, John A. Putnam, Gilbert Conant, Nathaniel Carleton, Geo. A. Todd.

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## BREAD AND HONEY.

The Trustees of the Society authorized the Committee on

Bread and Honey to award in gratuities a certain amount of money for the encouragement of making good bread, the bread to be made without the aid of saleratus or other alkaline substance, and the process of making fully stated. Also to award gratuities for Bees and Honey, if there were contributed what seemed worthy.

In household economy the making of good bread is a subject of much interest. Not only health but equanimity of mind is oftentimes disturbed by the continuous use of badly made bread. Hence a lady at the head of a family, who cooks herself or by servants, should be an adept in this matter.

This is a practical world, and all young ladies who can make good bread should be looked upon by young men, in selecting a wife, as possessing an important qualification to preside as mistress of a household.

Your Committee, after carefully testing the several specimens of Bread exhibited, unanimously award the following gratuities, viz:

To Mrs. J. C. Underhill, Peabody, $2.

To Hannah N. Burnham, Essex, $2.

To Mary Bailey, Methuen, $2.

To Etta Brown, Ipswich, $1.50.

To Mrs. Dean R. Parker, Groveland, $1.50.

To Deborah Pike, Rowley, $1.

There was one specimen of Bread as good as any on the table which your Committee could not, under the rules of the Society, award a gratuity, as there was no statement how it was made.

GRATUITIES FOR BEES AND HONEY.

To N. A. Dickinson, Ipswich, $2.

To Henry Alley, Wenham, Bees, $3.

To John Perkins, Ipswich, Bees, $2.

To Henry Alley, Wenham, Honey, $2.

STATEMENT OF MRS. J. C. UNDERHILL.

Process of Making Bread.—For six quarts of flour

take six common sized potatoes; pare, slice, and boil them soft in as little water as possible. When done, mash them, mixing with them a tea-cup of flour; then pour on cold water enough to cool sufficiently to rub smooth with the hands, adding one-half cup full of Cambridge Liquid Yeast, and let it rise six hours in a warm place.

Make a sponge of the six quarts of flour, one quart of tepid water and the above preparation, adding a little salt and two table-spoonfuls of white sugar.

In twelve hours stir into the sponge a tea-cup full of boiling water and sufficient flour to make the paste stiff enough to knead, and let it rise. Then knead and make into loaves, and when sufficiently light bake three-quarters of an hour in a slow oven. Mrs. J. C. Underhill,

Broadfields Farm, West Peabody.

Committee—Josiah Newhall, Charles Ingalls, F. A. Wait, George Haskell, Amos Gould.

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## PEARS.

The Committee on Pears would state the exhibition as the finest ever presented to the Society. There were 94 entries, each and all deserving of great credit. After much time spent in the examination of the different specimens presented, have with much difficulty awarded the following premiums:

For the best plate of Pears, 24 specimens, Augustine Hodgkins, $5 and diploma.

To J. Perkins, Jr., for the best ten varieties, $3.

Two dollars each to Frank Perkins, Newbury, Bartlett; Thos. Capers, Newburyport, Belle Lucrative; R. Jordan, Ipswich, Benrre Bosc; J. Perkins, Ipswich, Onondaga; B. F. Stanley, Newburyport, Seckel; Eben Dodge, Salem, Buffum; B. F. Stanley, Newburyport, Winter Nelis; Wm. Willcomb, Ipswich, Vicar of Winkfield; R. Daniels, Ipswich, Lawrence;

B. F. Stanley, Newburyport, Louise Bon; A. H. Wildes, Ipswich, Beurre Clairgeau; Wm. Stone, Ipswich, Golden Beurre; A. Hodgkins, Ipswich, Duchess d'Angouleme; Maynard Russell, Ipswich, Beurre de Anjou; Albion Smith, Salem, Urbaniste; Wm. H. Graves, Ipswich, Sheldon; R. Daniels, Ipswich, Marie Louise; N. R. Wait, Ipswich, Hovey's Dana; A. J. Hubbard, Peabody, Paradise d'Autumn; J. Perkins, Ipswich, Doyenne Bossock.

Gratuities.—James Peatfield, Ipswich, $2; Edwin Currier, Newburyport, $1; Joel Caldwell, Ipswich, $1; R. Jordan, Ipswich, $1; N. R. Wait, Ipswich, $1; B. F. Stanley, Newburyport, $1; John Ives, Salem, $1; A. J. Hubbard, Peabody, $1; Benj. P. Ware, Marblehead, $2; J. A. Rogers, Ipswich, $1; Peter Wait, Danvers, $2; Wm. Chickering, Andover, $1.

For the Committee—Samuel C. Pitman.

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## APPLES.

The Committee on Apples report as follows:

Benjamin P. Ware, Marblehead, best 20 varieties, diploma and $5.

William W. Perkins, Newbury, best 10 varieties, $3.

Samuel Newman, Peabody, best 24 specimens, diploma and $5.

Benj. P. Ware, Marblehead, best 12 specimens Pickman Pippin, $2; De Drap d'Or, $2; Seaver Sweet, $2; R. I. Greening, $2.

Aaron Lowe, Essex, best specimens Porter, $2.

A. H. Gould, Topsfield, best specimens Baldwins, $2.

Willard G. Rolf, Newbury, best specimens Roxbury Russet, $2.

Thomas K. Leach, Topsfield, best specimens Hubbardston Nonsuch, $2.

Wm. W. Perkins, Newbury, best specimens Danvers Sweet, $2; Northern Spy, $2.

Willard F. Kinsman, Ipswich, Gravenstein, $2.

Samuel Newman, Peabody, best Minister, $2.

Eben Lord, Ipswich, best Sweet Baldwin, $2.

Y. G. Heard, Ipswich, for best 12 specimens of any other variety Russet Pearmain, $1.

Richard Hood, Danvers, best Fall Harvey, $1.

Elijah Vose, Ipswich, best Pennock's Winter Red, $1.

Peter Waite, Danvers, best Garden, $1; Killham Hill, $1; Hunt's Russet, $1.

A. F. Huntington, Amesbury, Porter, $1.

Aaron P. Stone, Ipswich, Roxbury Russet, $1.

D. A. Todd, Rowley, Nonsuch, $1.

D. Bradstreet, Topsfield, Bradstreet Sweeting, $1.

M. F. Batchelder, Nonsuch, $1.

S. N. Baker, Ipswich, Russet, $1.

Geo. W. Sanborn, Georgetown, Russet, $1.

James Peatfield, Ipswich, William's Favorite, $1.

Committee—William Chickering, Alfred Ordway, Henry L. Ordway, B. F. Huntington, James Flint.

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## GRAPES, PEACHES, &c.

The exhibition of Grapes was large and good. Most of the varieties for which premiums are offered by this Society were represented by creditable specimens, and some by bunches of superior size and excellence. Among the latter were admirable specimens of Rogers's No. 15 (Agawam), grown by Mr. Alonzo Quimby of Groveland, which for size of the berry, symmetry of the bunch, uniformity of color, and ripeness of the pulp, we have never seen surpassed. There were also fine displays of Rogers's No. 22 (the Salem), the Delaware, Diana, Concord, Creveling, and Isabella. Many of these were,

of course, imperfectly ripe, partly owing to an unfavorable season, and because the exhibition is held earlier than the time when our out-door grapes usually mature, with few exceptions.

The Rogers Grapes maintained on this occasion that superiority of quality, as fruit for the table, which is now generally conceded to this remarkable series of hybrids. Certainly no collection of Grapes in the garden, for family use, can be considered complete without at least Nos. 15 and 22, (the former amber-colored and the latter black,) and if 4, 43 and 19 are added thereto, the variety will not be found amiss. All these are good, and the vines are thrifty and vigorous in their growth, except a tendency in No. 15 to mildew, which can be checked by powdering or sulphur in dry weather. They will also bear our winters without being laid down, which we consider an essential quality, for vines which need to be taken down in winter cannot be recommended for general cultivation.

There were five dishes of the Concord and the Crevelings and other sorts on the table, especially in the fine collection of Mr. D. H. Stickney, of Groveland, which embraced the largest number and best variety shown by a single exhibitor. Both the Concord and the Creveling are good grapes, and in general appearance they resemble each other. If we were called upon to name the grape which presents the most good fruit, and can be grown by everybody with the least trouble, we should say the Concord. Where only one vine is grown, in the back yard, it should be the Concord. It should be in every collection. And this because it is hardy and thrifty, and always yields an abundant crop of fruit, which ripens early. The flavor of the grape is not first rate, and is not relished by some on account of its "foxiness," but most people who buy grapes in the market consider it nice; and so does the writer of this report. The Concord, being a good wine grape, is usually chosen for vineyard purposes, on account of its reliability in growth.

The samples of Delaware which were exhibited were generally excellent. This is a justly favorite grape. Its small,

compact bunches of little amber berries are as pleasing to the eye as any fruit that grows, and upon the tongue it yields a delicious sweetness. The vine is rather a slow grower, but it should be in every collection.

Of the newer Grapes there were fine specimens of the Adirondack and Isabella, both black, and of the amber Diana, neither of which can be ranked in the first class. The Eumelan was not shown. A splendid dish of the "Lady Mallard," a seedling from Lawrence, attracted the attention of the Committee, but on account of its inferior quality they were unable to commend it.

The exhibition of cold house Grapes was small and not remarkable.

The display of Peaches was inferior, and did not do justice to the fruit-growers of the county, nor even to a season which is condemned as unpropitious.

Among these several exhibitors and claimants the Committee distributed, according to their best judgment, the meagre premiums and gratuities offered by the Society. These awards do not by any means indicate in each case the exact measure of merit, but are given in the best way they can be under the necessarily somewhat arbitrary rules of the Society.

It is gratifying to notice the increasing interest that is taken in grape culture. There is no fruit more wholesome and delicious, and none which will pay better for the labor expended upon it, whether by the amateur in his city garden, for his own pleasure, or by the farmer in his vineyard, producing for the market. There is a profit in it. The one solitary vine which may be planted in the laborer's back yard and spread its beautiful foliage over his door and hang its purple clusters all around his windows, is a sort of "farming by inches" which may well be encouraged.

Of the expediency of cultivating the grape as a field crop, there can be no question. That the vineyard pays, has been repeatedly demonstrated in Massachusetts and in Essex County. The capital required is not large, the necessary labor is

not great, the crop is not more uncertain than others, and the amount of knowledge required is readily obtained.

There are many stony acres in the southern part of our county, now almost useless, which might be as vine-clad as the valleys of the Alps, while the light, sandy soils and warm exposures of the valley of the Merrimac seem specially to invite experiments in this direction. And although we cannot expect to rival countries of warmer skies and longer seasons, in the quality of our fruit, we may raise crops which will pay well for the capital invested. The market for grapes as an article of food is now immense, and must yearly enlarge, for now that the masses have got a taste of the grape, there will be no limit to the demand. And we believe this fruit can be raised profitably, at the market price, as well as strawberries, raspberries, blackberries, and other small fruits.

The interest which has been taken in grape growing in Essex county has already resulted in the addition of several valuable varieties to the list of vines. The merits of at least a half dozen of Rogers's Hybrids are recognized throughout the country. Allen's White Hybrid, when grown under favorable circumstances, is unsurpassed, and perhaps unequaled. And rumor says that another veteran cultivator, in old Ipswich, has one or more new seedlings which promise even greater things yet, the whole of which will be revealed in the fullness of time. We hope it may be true. The best grape for New England cultivation is yet to be produced. Whoever shall originate the hardiest, healthiest, sweetest and earliest of grapes, will be entitled to the diplomas and premiums of all Societies.

For the Committee—Gilbert L. Streeter, Chairman.

AWARDS.

R. Rutherford, Ipswich, for best Freestone White Flesh Peach; Willard F. Kinsman, Ipswich, Yellow Rareripe: Benjamin A. Gray, Salem, Essex County Seedling—$1 each. Alonzo Quimby, Groveland, best Concord Grapes; Mrs. Eben Caldwell, Ipswich, best Hartford Grapes; Abram Lord, Ips-

wich, best Isabella Grapes; John Perkins, Ipswich, best Delaware Grapes; R. Jordan, Ipswich, best Iona Grapes; D. H. Stickney, Groveland, best Allen's Hybrid Grapes; N. R. Wait, Ipswich, best Diana Grapes; D. H. Stickney, Groveland, best Adirondac Grapes; R. Jordan, Ipswich, best Israella Grapes; D. H. Stickney, Groveland, best Rogers' No. 3 Grapes; D. H. Stickney, Groveland, best Rogers No. 4 Grapes; S. B. Gregory, Hamilton, best Rogers No. 22 Grapes; Alonzo Quimby, Groveland, best Rogers No. 15—$2 each. Aaron Low, Essex, best assortment of Cold House Grapes, $5. D. H. Stickney, Groveland, best collection of ten varieties, or more, diploma and $5. D. H. Stickney, Groveland, best specimen of Crevelling, $1. Peter Wait, Danvers, best basket assorted fruit, $3. Mrs. Robert Jordan, Ipswich, 2d best basket assorted fruit, $2.

GRATUITIES FOR GRAPES.

E. Vose, Ipswich, $1. J. Dudley, Ipswich; James Peatfield, Ipswich; R. Daniels, Ipswich; J. P. Cowles, Ipswich: Eben Dodge, Salem; Tristam B. Fall, Ipswich; Gilbert Conant, Ipswich; Henry Shaw, Lawrence—50 cents each.

The Committee also recommend gratuities of 50 cents to Mrs. Oliver Underhill, and Mrs. Rawson Underhill, for excellent specimens of canned fruit; and of 50 cents to A. J. Bedel, of Rowley, for samples of domestic wine.

Committee—G. L. Streeter, Y. G. Hurd, Jas. Knowlton.

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## FLOWERS.

The Committee award to:

T. Capers, Newburyport, best pair Parlor Bouquets, premium, $3; do. best pair Hand Bouquets, premium, $2; do. best dish of Cut Flowers, premium, $2; do. best 12 Dahlias, premium, $1; Mrs. George Giddings, Ipswich, Floral Designs, premium, $2; Mrs. Charles H. Goss, Ipswich, Petu-

nias, premium, $1 : Mrs. A. H. Wildes, Ipswich, Pansies, premium, $1 ; Mrs. Hunt, Ipswich, Phlox, premium, $1 ; T. Capers, Newburyport, Verbenas, premium, $1 ; Mrs. D. R. Parkhurst, Groveland, Native Flowers, premium, $1 ; Thos. Capers, Newburyport, largest display, premium, $3 ; Mrs. N. R. Rutherford, Ipswich, Vase of Flowers, gratuity, 50 cents : E. Green, Ipswich, Dahlias, gratuity, 50 cents ; Emma Wellington, Ipswich, Cut Flowers, gratuity, 50 cents ; Arthur Kimball, Ipswich, Basket Flowers, gratuity, $1 ; Mrs. R. L. Weymouth, Ipswich, Rustic Flowers, gratuity, 50 cents ; Lizzie W. Farley, Ipswich, Floral Design, gratuity, $1 ; Mrs. W. S. Homer, Ipswich, Ferns, gratuity, 50 cents ; Lillie Otis, Ipswich, Vase of Flowers, gratuity, 50 cents ; Abbie Newman, Ipswich, Cut Flowers, gratuity, 50 cents ; S. J. Fellows, Ipswich, Cut Flowers, gratuity, $1 ; M. E. Peatfield, Ipswich, Cut Flowers, Mrs. D. R. Parker, Ipswich, Hand Bouquets, Mrs. J. B. Grant, Ipswich, Flowers ; E. Green, Ipswich, Flowers, Abbie F. King, Ipswich, Wild Flowers, S. M. Hale, Rowley, Flowers, L. A. Dodge, Ipswich, Flowers—each 50 cents ; H. P. Goss, Ipswich, Flowers, $1 ; Miss E. Ellis, Mrs. T. F. Cogswell, J. W. Bond, James Cook, E. K. Lord, Maria Bancroft, J. B. Goodhue, Mary C. Farley, Ipswich, Flowers—each 50 cents.

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## VEGETABLES.

The Committee on Vegetables report eighty-nine lots on exhibition. They award premiums and gratuities as follows :

### PREMIUMS.

For 12 best Turnip Beet, S. A. Merrill.
For 12 best Short Horn Carrots, M. F. Batchelder,
For 12 best ears Early Corn (Crosby's), S. A. Merrill.
For 12 best ears Late Corn (Stowel's), Aaron Low.
For 3 best Savoy Cabbage, M. F. Batchelder.

For 3 best Drumhead Cabbage, Joseph Horton.
For 3 best large Drumhead Cabbage, S. A. Merrill.
For 12 best large Dutch Parsnips, D. G. Todd.
For 12 best round flat Tomato, S. A. Merrill.
For 12 best spherical Tomato, Aaron Low.
For 12 best Tomatoes, Peter Smith.
For best specimens of greatest variety, Aaron Low.
For 6 best Mangold Wurtzel, Benjamin F. Ware.
For 12 best Strap-leaf Turnips, M. F. Batchelder.
For 3 best Marrow Squashes, S. A. Merrill.
For 3 best American Turban, M. F. Batchelder.
For 3 best Hubbard, M. F. Batchelder.
For best peck of Danvers Onions, I. A. Rogers.
For best peck of Flat Onions, S. A. Merrill.
For best peck of Red Onions, S. A. Merrill.
For best peck Early Rose Potatoes, S. A. Merrill.
For best collection of Garden Seeds, Aaron Low.

GRATUITIES.

For fine Cauliflowers, S. A. Merrill, $1; Muskmelons, S. A. Merrill, $1; Sweet Potatoes, Sidney Low, $1; lot of Peerless Potatoes, P. L. Osborne, $1; fine Vegetable Egg, George T. Thornton, $1; Kohl Rabi, B. A. Robinson, $1; Winter Crookneck, W. P. Phillips, $1; 2 large Watermelons, W. P. Phillips, $1; Mammoth Squash, W. P. Phillips, $1; Phinney's Melon, Aaron Low, $1; Fine Carrots, F. H. Appleton, $1; Sill's Melon, Andrew Lackey, $1; Cranberries, T. Prime, $1; Carrots, Charles Mitchell, $1; Early Rose, W. P. Phillips, $1; collection of Herbs, M. F. Batchelder, $1. For large variety and excellent quality of collection of vegetables, the diploma of the Society is awarded to Samuel A. Merrill, of Danvers.

There were 89 entries in this department this season: contrasting that with the 59 of last, we see one proof of the wis-

tom of holding our annual fair two years in succession in the same place.

Over thirty years ago I sold the first tomatoes ever brought into the market of my native town. At that time we knew of but one variety—the large red; a year or two after, some of the purple sorts began to creep in. For several years past I have raised for seed purposes upwards of twenty varieties of this popular vegetable. Amidst so many varieties the new beginner stands confounded, asking, "What shall I plant?" Let us first examine into the characteristics of some of these varieties, and then, having these before us, we shall be prepared for a discussion of their merits. The old classification was into Large Red and Round Red; Large Red meaning a large sized tomato of an irregular shape, and Round Red any flat-round or spherical sort. Grouping together such of the varieties now before the public as admit of being thus classified, under Large Red, Alger, Chihuahua; and under Round Red, Wonder, General Grant, Charter Oak, Mammoth Cluster, Essex Early, Crimson Cluster, Orangefield, Powel's Early, Trophy, Valencia Cluster, Boston Market, Tilden, New Mexican, DeLaye, Rising Sun, Lester's Perfected, or Fegee, and New White Apple, Grape, Cherry, and Plum. Some of these grow a little irregular, but for the most part are round in shape. Subdividing into spherical and flat-round, I should put into the first class Mammoth Cluster, Charter Oak, Orangefield, Essex Early, New Mexican, New White Apple, Grape, Cherry, and Plum. Let me here note, that probably owing to a growth interrupted by drouth, the second setting of the fruit of a round variety may be irregular in shape. Into the second class go the remainder, with the limitation that Tilden's Tomato, DeLaye, Cook's Favorite, Maupay, Keyes, Trophy, and Rising Sun hold nearly an intermediate position. Early York, Philadelphia Early, Hubbard, and Dwarf Scotch, would be classed with Large Red, except for their size. The Fig Tomatoes, yellow and red, make a class by themselves. Suppose a beginner was asked which of the sort he should plant

for Large Red; I remark that Alger is early and prolific; Chihuhua is very late, enormously large, but apt to decay before fully maturing. I also add that the Round Red sort are much the more popular in the market. Of the Round Red kind I will here remark, that for want of proper care in selecting seed stock, and also for a natural tendency to deteriorate, which may be influenced by locality and season, they will sometimes grow irregular in shape. Of those named, Cook's Favorite has so deteriorated with me, that for the future I shall not grow it. Tilden, though yet an excellent tomato, is not so regular in shape as when it was first sent out.

Let us now classify our tomatoes with reference to earliness. First, however, let us dismiss the Cherry, Grape, Plum and Fig sorts, with the remark that with the exception of the Fig they are all early sorts; that for flavor they cannot be surpassed; that they are all highly ornamental; that they are the best sorts for preserving in sugar; that they, particularly the Grape and Fig, are highly ornamental when seen growing, or brought on to the table for decorative uses; and finally, that the Fig, as its name would indicate, is fig-shaped, and has been so nicely preserved as to make quite a good imitation, in both appearance, color and flavor, to the fig of commerce.

Of no vegetable have we more conflicting testimony on the question of earliness than of the tomato. Let me state a few facts which will explain away some apparent contradictions. First, if the same variety of tomato be planted side by side in the same bed, on the same day, and the plants be transplanted on the same day, one lot on upland and the other on lowland, those on the upland will yield the earlier fruit. Second, if the same conditions be carried out, with the exception that the two lots be planted in the same location, but the soil in one part shall be richer than the other, those growing on the poorer soil will ripen the earliest fruit. Third, if every condition is the same, but a difference in exposure, one lot having a warmer spot, that lot will ripen the earliest fruit. Fourth, if seed of the same varieties be planted with a difference of some weeks

between them, it is quite possible that those last planted may ripen earlier fruit, for the first lot may be dwarfed and otherwise injured by cold weather. Fifth, I am inclined to believe that a trimming of both tops and roots will make a difference as regards earliness. Now if we find this difference where the same kind is planted, of course we shall find the same apparent difference in the matter of earliness where the two kinds are similarly treated, when in reality there would be no difference. I have also found in my experience that a kind which I knew by two years of experimenting as an early sort, when planted where it had apparently every condition to favor earliness, ripened its fruit later than any kind I raised that season; a lesson to me not to pronounce too emphatically from the result of the experimenting of a single season. I have found Early York, Hubbard (which I think is the same thing), Dwarf Scotch, Essex Early, Keyes, and General Grant, among my earliest. Trophy is an early sort, though not of the very earliest; Maupay, Lester's Perfected (or Fegee), New Mexican, and Valencia Cluster, I rank among my latest sorts.

Discussing the Tomato with reference to size, I class Dwarf Scotch, Early York, Hubbard, Essex Early, Keyes, General Grant, Charter Oak, New White Apple, and Orangefield, as below the average; and believe their peculiar place (of all but Orangefield) to be as early tomatoes, though in yield both Early York and General Grant are hard to surpass. The Trophy is decidedly the largest of tomatoes yet introduced that are available for market. The spherically round tomatoes are more apt to fail in filling out solid than the flat-round sort, and particularly is this true after the hottest part of the season is past. They are also more liable to be green, unripe, and cracked near the stem, than the other sorts. Tomatoes differ as much in flavor as do different varieties of apples; and soil and seasons appear to have some influence. Some are very sour, some sweet, others at times bitter, and again at times a rotten flavor is present. The quantity of the crop depends a

great deal on its earliness. I have had a yield at the rate of over one thousand bushels of ripe tomatoes to the acre.

I pass from the general discussion to the merits and peculiarities of some of the varieties. I find both Alger and Keyes to be tomatoes of excellent flavor, and these are each distinguished by a foliage very similar to and suggestive of the potato, to which the tomato family is allied; the flavor of each of these vegetables suggest the other: and the fruit of the tomato suggests strongly the ball of the potato. The Boston Market tomato is of good market size, is early, colors well all over, and fills up very solid. This is the favorite sort around Boston, where leading market gardeners have their different strains. Around New York this kind has not always given such satisfaction, the gardeners there appearing to lay more stress on size than on some more valuable characteristics, which have to be sacrificed. General Grant closely resembles Boston Market, but is somewhat smaller, and perhaps rather more solid; it may be a little earlier, and is somewhat smoother. I consider this but a strain of the Boston Market. The Mammoth Cluster is large, round and showy, but is too inclined to be hollow to be considered an acquisition. Orangefield and New White Apple make a class by themselves. They may be called fruit tomatoes: there are no other sorts that equal these for eating uncooked, as we eat an apple. They are somewhat small in size, but of elegant shape and color, contrasting beautifully with each other when brought on to the table in a dish in their natural state. They peel as readily as a peach, and their flavor is unsurpassed. The vines of Dwarf Scotch, De Laye and Wonder are all dwarf in their habits and growth. DeLaye is a superb tomato, both in color and quality, when you can mature the fruit, but it is very late and quite a shy bearer, so much so as to be of no value except for its curious habit of growth, the leaves being very dark green, and exceptionally thick, while the stalk is very stout. Wonder, I have grown but one season. It somewhat resembles DeLaye in habit of growth and bearing qualities, though the plant is

larger and more productive. Dwarf Scotch is the most dwarf variety having the habits of the common sort, with which I am acquainted. I consider it valuable for those gardeners who seek an early kind, and have but little room to spare. Keyes's Prolific was much over-praised when first introduced, and a reaction in public sentiment has caused it to be ranked lower than it deserves. It is early, a fair bearer, yielding fruit sweeter than most varieties. Maupay is a large, solid, handsome, late sort, having quite a basin around the stem. Early York is somewhat irregular in shape, very early and very productive. Fejee and Lester's Perfected are so nearly alike that there is no distinction worth noting. The fruit is large and very solid. If this tomato was of a scarlet color, and as early as Boston Market, it would be a standard kind throughout the New England and Middle States. However excellent in every other respect a tomato may be, a purple color is death to its prospect for general market purposes. The Tilden does best with me on low, rich land, where it grows to a large size, fills out well, and its color is of a peculiarly brilliant scarlet. Like the Lester, it appears to be more popular in private gardens than in the public market. The Trophy is the largest of all the round kinds. On my grounds, grown on a large scale, it proves to be, as a whole, very symmetrical and remarkably solid for so large a variety. I consider it a tomato of great promise, and know of no other variety that I would sooner recommend for family use or for market purposes. It will not yield in number equal to many other sorts, but then the magnificent size makes all awards. I had a number of clusters this season that had nearly a peck in each.

The yellow and white varieties are closely allied; the white being of a light straw color, and each of these has a sweet flavor peculiar to them. It is somewhat singular that this fact is true of several kinds of berries, among which white varieties are exceptional. White strawberries are sweeter than the red sorts: the same is true of white raspberries, currants, blackberries, and I think I may add the white varieties of grapes.

As food for stock, tomatoes should be of a value analagous to apples, as they are closely allied, the acid of each being malic. Cows will eat them ravenously, consuming nearly a bushel of green ones at a meal. I have not seen much increase in the flavor of milk when tomatoes are fed green, and have never fed them ripe. As tomatoes will yield over a thousand bushels to the acre, and are already on the ground, requiring no shaking off, this comparative value is held worthy of a test by experimenters. The large yellow sorts would probably be the best kinds to grow,

Tomato vinegar is largely manufactured in New Jersey, by a patented process, but into which, it may be very safely assumed, sweetening in some form enters. It is said to be very profitable.

Some hue and cry has been lately raised about the tendency of the use of the tomato to produce cancerous diseases. I have as yet seen the name of no reputable physician connected with this theory, and as the acid of this fruit is identical with that of the apple, I presume the charge would be as reasonable against one as the other.

As regards the cultivation of the tomato, this is so generally understood that hardly more than a remark is required under this head. The tomato will not grow in the open air before the ground has become warm, and all planting earlier than this serves to but injure the plant. They are oftentimes started too early in hot beds, and because overgrown, are spindling before they can be transplanted out into the open air. I would not advise to plant the seed under glass earlier than April 1st, nor transplanted into the open ground earlier than May 20th. Those planted for an early crop should be put in ground not very rich.

For the Committee—James J. H. Gregory.

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## COUNTERPANES, &c.

The Committee on Counterpanes, Carpeting and Rugs, re-

spectfully submit the report of their award of premiums and gratuities, as follows:

COUNTERPANES.

| | |
|---|---|
| Mrs. Samuel H. Green, Ipswich, 1st premium. | |
| Hannah W. Kimball, Salem, 2d premium. | |
| Margaret Wardwell, Methuen, gratuity, | $2 00 |
| Bessie H. Palmer, Ipswich, gratuity, | 1 00 |
| Lucretia Choate, Essex, gratuity, | 1 00 |
| Eliza H. Lord, Ipswich, gratuity, | 1 00 |
| Abbie Courtenay, Ipswich, gratuity, | 1 00 |
| Annie P. Clark, Topsfield, gratuity, | 1 00 |
| Rebecca Allen, Beverly, gratuity, | 1 00 |
| Luell Averill, Ipswich, gratuity, | 50 |
| Mrs. Eben. Laheman, gratuity, | 50 |

RUGS.

| | |
|---|---|
| Mrs. D. J. Hale, Rowley, 1st premium. | |
| Mrs. Nathaniel Spinney, Ipswich, 2d premium. | |
| Mrs. L. S. Brown, Ipswich, gratuity, | $1 00 |
| Mrs. Nancy S. Russell, Ipswich, gratuity, | 1 00 |
| Flora and Mabella Ordway, Ipswich, gratuity, | 1 00 |
| Mrs. Harriet N. Foster, Ipswich, gratuity, | 1 00 |
| Mrs. William Hurd, Ipswich, gratuity, | 1 00 |
| Mrs. Ruth D. Wilson, Beverly, gratuity, | 1 00 |
| Charles Webb, Danversport, gratuity, | 1 00 |
| Mrs. Levi L. Howe, Ipswich, gratuity, | 50 |
| T. Morley, Ipswich, gratuity, | 50 |
| Mrs. Perkins Potter, Ipswich, gratuity, | 50 |
| Mrs. T. D. Gould, Ipswich, gratuity, | 50 |
| Mary E. Rust, Ipswich, gratuity, | 50 |
| S. M. Webber, Ipswich, gratuity, | 50 |
| Annie Lindberry, Ipswich, gratuity, | 50 |
| Mrs. Hannah W. Kimball, Salem, gratuity, | 50 |
| Mrs. Samuel W. Towne, Salem, gratuity, | 50 |
| Mrs. Mary Titcomb, Newbury, gratuity, | 50 |

Mary Tozer, West Newbury, gratuity, .50
Marietta Lufkin, Pigeon Cove, gratuity, .50
Mrs. S. C. Foster, Groveland, gratuity, .50
Carrie B. Killam, Boxford, gratuity, .50
Maria Millett, Rockport, gratuity, .50
Carrie L. Porter, Wenham, gratuity, .50
Mrs. Eliza J. Hobbs, Wenham, gratuity, .50
Mrs. Thomas Farris, Beverly, gratuity, .50

Committee—Eben Sutton, Mary A. Messinger, Lillie W. Abbott.

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## ARTICLES MANUFACTURED FROM LEATHER.

The Committee award to Thomas L. Jewett, of Ipswich, for Calf Boots, premium, $2.

To F. W. Henderson, of Rowley, for thick Boots, pr. $2.

Do. do. do. for thick Shoes, pr. 2.

To Henry Hobbs, of Wenham, for Wagon Harness, 1st premium, $8.

Committee—D. H. Stickney, J. A. Johnson, John Perkins.

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## MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise report as follows:

There were no articles entered in this department for which premium was offered, but the Committee give gratuities as follows:

To Charles L. Palmer, of Boxford, for Hammocks manufactured, $1.

To R. T. Dodge, of Ipswich, for Rattan Baskets made, $1.

To M. V. B. Perley, of Rockport, for Raw Hide Seated Chairs manufactured, $2.

To W. M. Carpenter, of Rowley, for Infant Shoes manufactured, $2.

To Urius Urry, of No. Andover, for Horse Shoes made, $1.

To George H. Jones, for Photographs, $1.

Committee—S. W. Hopkinson, H. G. Herrick, Stephen Osgood.

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## FANCY WORK.

The Committee regret that the display of articles in this department was so meagre. They find nothing upon which they feel justified in bestowing the regular premiums. The following gratuities are awarded:

### WORK BY CHILDREN OF TWELVE YEARS AND UNDER.

Toilet Mats and Cushion, by Emma F. Cogswell of Ipswich, $1.

Cushion, by Jennie L. Cogswell of Ipswich, $1.

Two mats, by Ella L. Smith of Ipswich, $1.

Drawings, by Emily G. Patch of Ipswich, $1.

### WORK BY OTHERS.

Fancy Cart and Sleigh, by Augustine H. Spiller of Ipswich, $3.

Blanket and Skirt, by Mrs. L. R. F. Hammatt, Ipswich, $3.

Hair Work, by Maria Estes of Peabody, $2.

A set of four pieces of Knit Work, by Hannah W. Kimball of Salem, $2.

Lace Work, on an old-fashioned lace cushion, by Sarah Stanwood of Ipswich, $1.

Lace Work, by Abigail Haskell of Manchester, $2.

A very neat set of fancy articles in Bead work was exhibited

by Miss Lucretia Allen, a blind lady, of Danvers, upon which the Committee bestow a gratuity of $3.

Also an Engraving in India Ink, admirably done, by E. R. Brown of Ipswich, to which is given a gratuity of $3.

A Rustic Stand, by Philip E. Clark of Ipswich, holding an aquarium and a small fern case, should be mentioned as very neatly executed; to which is given a gratuity of $3.

It is not often that *Butter* is placed among fancy articles, and much seldomer a *Flower* constructed of that oleaginous substance, but the Committee find a Dahlia made of butter, by Mary S. Caldwell of Ipswich, which they consider worthy of special commendation for its ingenuity, and to which they award a gratuity of $2.

Committee—Thomas Morong, John Price, Andrew Nichols, Mrs. John Pike, Mrs. D. F. Appleton.

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## FARMS.

The Committee on Farms regret that they are forced to commence their report by quoting a complaint made by their predecessors many years ago, and often since repeated in the Essex County Agricultural Society, "that so few of our farmers have been willing to come forward as competitors for the liberal premiums offered for farm management." A great variety of agricultural or horticultural productions, from upwards of fifty different farms in the county, were brought to the society's annual exhibition at Ipswich, yet in only one instance was an exhibitor willing to submit the entire management of his farm, with its herds, its flocks, its fields, its orchard and its garden, to the inspection of the committee appointed by the society to examine and to report thereupon.

The reason for this general unwillingness to compete for the premiums offered for the best managed farms, is (in the opinion of the writer of this report), a general conviction in the

minds of our most industrious and thrifty farmers, that they are somewhat "behind the times" in their agricultural management, while many of them must also be aware that they would exhibit to critical visitors a lamentable lack of system, order and neatness. So they content themselves with taking to the annual cattle show some of their best animals, fruits or vegetables, leaving behind them at their homes the evidences of their unprogressive or slovenly management, and permitting the "Fancy Farmers" of the county to carry off the premiums which should reward well managed industry—premiums which they might secure, if they would but temper their praiseworthy toil and their commendable thrift with more system and with some attempt at neatness.

But the "Fancy Farmers" who are thus permitted to "walk over the course," and to win the high honors offered by the society to all competitors, do something for the advancement of agriculture beyond demonstrating how commendable it is to have fences clear from weeds, to have buildings neatly kept, and to have "a place for everything, and everything in its place." It has been asserted, that while the working farmers of New England are not inferior in natural intelligence to any other class of the community, they possess as a body less of that acquired knowledge which specially relates to the art by which they live, than those occupied in manufacturing or commercial pursuits. In Essex county, however, our yeomen have, during the past fifty years, been able to profit, when they so desired, by the visible teachings of their neighboring "Fancy Farmers," who, with no small outlay of money (and often for their own amusement rather than from any desire to educate others), have diffused valuable knowledge by experiments, generally profitless in a pecuniary point of view to themselves. As a general thing, a thrifty, industrious, working farmer, pays little heed to the theoretical harangues of any soft-handed man of leisure, but if he can witness, year by year, the results of a practical operation of these same theories, either good or bad, his sterling Yankee good sense leads him to

adopt or to reject the example thus set him. In this way, the often sneered-at "Fancy Farmers" of Essex county have done great good, either by practically demonstrating that it is profitble to leave the same old ruts which have deepened year by year for the highway of progress; or by conclusively proving how worthless are many of the much talked of fashionable agricultural theories.

Your committee, instructed to examine one of these so-called "Fancy Farms," witnessed its improvement and its management with great interest; and it is to be hoped that the following imperfect sketch of it may induce many of the farmers of Essex county, especially those owning low unproductive land, to make a personal examination for their own instruction.

The "Appleton Farm" is in Ipswich, about two miles south of the village, and on the line of the Eastern railroad. It is a homestead, having been in the possession of the family whose name it bears since 1635, and it is now owned by Daniel F. Appleton, who is also engaged in successful business operations elsewhere, but who directs its management, much of which he personally superintends. The good results of his mercantile system, and of the methodical employment of capital in improving the estate and the stock upon it, are plainly visible, and demonstrate that it would be well for many of our successful working farmers to invest more of their gains from their farms in blooded stock, manures, labor and ditch-tile, rather than in bonds or mortgages. The "Appleton Farm" contains about two hundred and fifty acres, of which fifty are bog-meadow, and eighty are rocky pasture. One of the committee, who was well acquainted with the farm before it came into the possession of its present proprietor, five years ago, stated that it then produced only about six tons of English hay, and twenty-five tons of fresh meadow hay. This year, it was estimated that Mr. Appleton had cut seventy-five tons of English hay, and two or three tons of meadow hay—the latter the product of the then last piece of unreclaimed meadow, which has since been plowed. There were, in addition, considerable

crops of corn, potatoes, oats, turnips, carrots, cabbages, Hungarian grass, rape, &c., &c.

Mr. Appleton's chief aim, in his plans for improving his farm (as he explained them to the committee), is to show what can be done in reclaiming low, wet lands, which he regards as the main future dependence of the farmers of New England for supplies of hay. His first step, after having had the low grounds of his farm surveyed, and the levels accurately taken, was to have a broad open ditch dug through them, with a sufficient fall to carry off the water emptied into it from smaller ditches and covered drains. This main ditch, which must be over a mile in length, and which has an average depth of at least three feet, is the foundation of Mr. Appleton's improvements, as it enables him to thoroughly drain all of the meadows through which it passes.

Having secured an outlet for the water, Mr. Appleton surrounded a meadow of ten acres with a "catch-water ditch," say, eighteen inches deep, leading, at long intervals, into the main ditch. This meadow had been kept constantly wet by springs in the headlands which surround it, but the plan of drainage was so successful that it was easily plowed and laid down to grass. The committee walked over a part of this meadow, which was plowed last fall for the first time, and sowed with herd's grass in December. It had received a top-dressing after the sowing, of a compost of loam from under pasture walls, mixed with ashes at the rate of thirty bushels to the acre, and a small quantity of barn-yard manure. The committee differed in their judgment of the yield then on the ground, estimating it at from two tons to two and a half tons to the acre.

A piece of three acres, comprising a part of the above mentioned ten acres, was a deep muck bed, and could not be plowed in the condition in which it then was, four years ago. Mr. A. consequently determined to try the experiment of covering it with gravel, which was done by his farm hands and teams, in the leisure days of winter. The following spring it was sowed with timothy—the seed started, but there was no crop worth

cutting that year. In the fall it was heavily top-dressed, with barn-yard manure and thirty bushels of unleached ashes to the acre. The effect of these fertilizers on the mixed gravel and muck Mr. Appleton described to the committee as wonderful, as for the next two seasons he cut over three tons to the acre of the best quality of hay. This, he said, taught him the value of muck land, when mixed with the earth of the uplands, whether gravel, or sand, or loam. He does not, however, recommend to others the same treatment of similar lowlands. The heavy gravelling is too expensive to be profitable, and the same result can be much more cheaply reached, by draining, then plowing and laying down to grass. Last year and this, he is under-draining with tile the same kind of land, and after having plowed it, top-dressing it lightly with gravel. In his opinion, this muck-land does not require as "thorough" draining as heavy clay land does—say sixty feet apart will do for the tiles. A five acre lot of such land, which had been cleared of roots, and stumps, and alder bushes, last fall, so that it was plowed and sowed in December, was making a good show of grass when the committee saw it. This piece had no other dressing than the ashes of the bushes and stumps burned when it was cleared.

This fall, ten acres more of this swamp have been plowed, and (in this case) *before* draining. This has been accomplished by the use of Holbrook's swivel plow, with "bog land attachment," by the means of which both oxen walk on the *sod*. Mr. Appleton regards this as a very valuable arrangement, which would have saved him much trouble and expense had he possessed it at the commencement of his improvement of low lands. He will not, however, remit the draining and the top-dressing on the piece just plowed with it.

Another, and perhaps the most important experiment made by Mr. Appleton in reclaiming swamp-land, is upon a piece of thirteen acres, lying upon the line of the Eastern railroad. This piece is "thorough-drained," with round tile and collars, thirty-three feet apart, and three to four feet deep; and a com-

plete report on it by the Essex Agricultural Society's committee on underdraining, with a diagram of the work, was published in the society's volume of transactions for 1870. It may be well to add here that this land is entirely unlike either of the pieces previously mentioned, having presented originally a broken surface of knobs and of pond-holes, with numerous springs. It consequently required a different treatment to reclaim it, and in place of the encircling "catch-water ditches," previously described, it was so thoroughly under-drained as to take off its own spring water. At the time of the committee's visit this piece was covered with a heavy growth of oats and of wheat (after a crop of corn, sixty bushels to the acre), which had been sown with grass-seed, and top-dressed with ashes and bone dust. Here was a visible example of the judicious employment of capital, by which a comparatively barren, wet pasture had been converted into a level, dry, fertile field.

The dry uplands of the "Appleton Farm" are in the main treated as similar land on other New England farms is treated. The committee saw ten acres in corn, three in potatoes, and two in ruta-baga, with say half an acre each in mangel-wurtzels, and carrots and cabbages—all of which it is intended shall be consumed on the farm. These crops all looked well, and were free from weeds.

Upon some pieces of light upland, far from the barn, Mr. Appleton has tried the plan of top-dressing grass with "commercial manures," but the results have not been satisfactory, and do not indicate that such treatment is profitable. He is now trying another plan, viz: He plowed up, two years ago, a piece of light plains, manured it, planted it with corn in the usual way, and afterwards laid it down to grass. This grass was not mowed, but left for sheep to feed upon, to see if with the fair start of feed which this treatment would afford the sheep, they would *improve* the land, while they fed themselves. He intends, after three or four years of this feeding, to turn under the sod, and to plant corn and ruta-bagas without manure. We shall see with what results.

On this farm two distinct and very different breeds of cattle are now kept, viz: The delicate and beautiful Jerseys, and the rugged and hardy Kerries, of the relative profitableness of which for New England farmers Mr. Appleton has no doubts. In his opinion, the Kerries, considered only as *milch cows*, will produce one-fifth more milk in a year than the Jerseys; but on the other hand, he frankly admits that the Kerries are very slow to mature, and that their calves are not more than half the weight they should be when they are of the age for the butcher.

After the 1st of July Mr. Appleton keeps his fourteen cows at the barn all the remainder of the summer, feeding them on clover, green oats, and corn-fodder, sowed for that purpose. He admits that corn-fodder is not the best milk producer, but he don't see how he could get along without it, although he expresses his determination to try more Hungarian grass another year. He has adopted "soiling" as a *necessity*, his pastures being unequal to sustain all the stock he must keep in winter, to produce the large quantity of manure which his large farm requires. Still, he has no doubt of the expediency and economy of "soiling," by which he makes a very few acres sustain his fourteen cows during the summer, and he has a barn cellar full of manure in the fall.

Mr. Appleton's sheep are thoroughbred Cotswolds, of which he is very fond and very justly proud. He keeps them for the breeding of rams to be sold as stock animals, and the recent exhibitions of the Essex Agricultural Society have demonstrated his success.

The farm buildings are in good repair, and the implements were not only of the most improved kinds, but were evidently well taken care of, instead of being left to lie and rot where they were last used, as is often the case. The barnyard and cellars were well adapted for making manure, which is, after all, the great secret of agricultural success. There are now wintered upon this farm sixty head of cattle, estimated by counting five sheep as equal to one cow, and four horses as

equal to five cows. The swine, of course, perform their part in the making of manures.

Mr. Appleton believes in "*high* farming," and endorses the old assertion, that "if *high* farming will not pay, then *low* will not." Thus far, he says, he has only been *making a farm*, and it is his wish that the Essex Agricultural Society send its committee on farms, three years hence, to ascertain the result of his experiments, and his endeavors to get his farm in high condition. By that time he expects to be able to show that his pecuniary investments have not only been productive, but profitable.

The committee have seen in Mr. Appleton's management much that is worthy of high commendation, and they regard his experiments in reclaiming low lands—*viewed as experiments*—as of great value to the agricultural interests of Essex county, where there is so large a proportion of comparatively unproductive swamps. They consequently recommend that the first premium of a diploma and thirty dollars be awarded to Daniel F. Appleton of Ipswich.

Dr. James R. Nichols kindly invited the committee, with the trustees and a number of prominent Essex county agriculturists, to visit his "Lakeside Farm," although it was not entered for premium. Had it been brought before the notice of your committee, officially, they would probably have simply reproduced Dr. Nichols's own comprehensive accounts of his experimental agriculture, published in his valuable "Journal of Chemistry," and also those given in the agricultural address which he delivered at Amesbury in September. Applying chemical science to agriculture, Dr. Nichols has made inquiries into the causes of the fertility and barrenness of the earth, the food and nutriments of vegetation, the nature of the soil, and the best means of meliorating its condition. Recognizing the fact that it is as necessary for a good farmer to feed his fields as it is to feed his cattle, he has endeavored to ascertain what elements have been abstracted from the soil of his farm, and to restore them or their chemical equivalents. Your committee

recommend that he should be rewarded for the experiments which he has so carefully made, and encouraged to continue them, by an award of the diploma of the society.

In conclusion, the committee must express an earnest wish that the working farmers of Essex county may be induced to compete for the premiums of the society for "the best managed farms." Our wealth owes its origin to productive labor, and if some of our thrifty yeomen would tell how they manage their farms, often small in extent, and what their profits are on the amount of capital invested therein, it could but increase the number of cultivators of the soil. It may be safely asserted that every industrious, temperate farmer in Essex county, who scatters the seed in faith, reaps the harvest in joy; and that although manufacturers and merchants occasionally draw prizes in their lotteries of life, the farmers enjoy health, contentment, independence, and a competence—the true earthly elements of human happiness.

For the Committee—Ben. Perley Poore.

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## GRAIN CROPS.

Your Committee, to whom were entrusted entries of this important crop, would submit the following report:

There were four entries of Grain Crops, three of Rye and one of Corn.

The entries of Rye were made by A. P. Noyes, of Middleton, S. A. Merrill, of Danvers, and J. C. and Romulus Jaques, of West Newbury, who also entered corn.

It was the intention of the chairman of this committee to notify each member to visit the farms on which all the crops entered were growing; but when he was notified of the entry of the Messrs. Jaques's crop of rye, there was no time to call a meeting of the committee before the reaper's hand would be upon it. He therefore, on the morning of the 12th of July,

proceeded alone to look at this field of rye, thought it a fine piece of grain, straw tall, heads long and well filled, and in his opinion it would exceed thirty bushels to the acre.

On the 13th of July the Committee were requested to meet at the farms of A. P. Noyes, of Middleton, and S. A. Merrill, of Danvers. Only a part of the committee were present. We found on the farm of Mr. Noyes what we thought to be an extra piece of rye—very heavy straw and a good head, but felt disappointed to find that it did not cover an acre of ground. It was the opinion of the committee that there would be at the rate of forty bushels to the acre. Mr. Noyes invited us to look at another field, where we also found a good piece of rye—the two fields containing about one and a quarter acre. The committee thought these two fields of grain to be more than one-half mile from each other—one piece upon his own farm, the other upon a farm owned by another man, cultivated by Mr. Noyes.

The committee also made a call, on the same afternoon, at Mr. Merrill's farm, of which a full account is given in the Transactions of the Essex Agricultural Society for the year 1868, and we were well pleased with our visit, and with the gentlemanly manner in which we were entertained by Mr. Merrill. His grain was Spring rye, and a fair crop might be expected, although the dry season had injured it some. It was the opinion of the committee that it would not be worthy of a premium.

October 4th, the committee met at the farm of J. C. and R. Jaques, of West Newbury, to examine their crop of Corn (all the members present). The whole field contained about three acres (only one entered). The committee thought there would be a large yield upon this acre, and a good crop upon the whole field. It was very free from weeds, and showed good cultivation, and so did the farm generally. Things looked as if "farming might pay." The committee left well pleased with their visit, and the statement of the Messrs. Jaques proves that we were not disappointed in our expectations. If the bushel

which they shelled was only an average, they would have had ninety-nine bushels, allowing 56 pounds to a bushel, which must be called a good crop for one acre.

The committee award the premium of diploma and $10 to J. C. and Romulus Jaques, of West Newbury, for their crop of Corn.

As was expected by the Committee, Mr. Noyes had a larger yield of Rye than did the Messrs. Jaques. Mr. Noyes's statement gives about 42 bushels, and the Messrs. Jaques's about 37 bushels per acre; but it was the unanimous opinion of the committee that the situation of Mr. Noyes's two fields of rye were such that he was not entitled to a premium. We award the premium of $10 and diploma to J. C. and Romulus Jaques, of West Newbury.

The committee are pleased to say that there have been more entries of grain crops this year than for some past years. On examining the Transactions of 1868 and 1869, we found no report from the Committee on Grain Crops. In 1870, only two entries were made. This year there are four, and we hope they will continue to increase, and that the committee for 1872 will be called upon to visit more fields of grain than the present committee have been. Seventy dollars are offered for premiums on grain crops; we could award only $20.

Who will make the entries in 1872? Is there no one who has 50 bushels of oats grown upon one acre of ground? Where are the men who grew large crops of barley, wheat, etc. Is there no "Poor" in Essex county? The small crop of hay the present year may account for no entries of that crop, and we hope the bean crop will not be entirely forgotten by the farmers of Essex county in 1872.

Committee—Abel Stickney, J. P. Goodale, Charles Rogers, T. B. Fall, E. K. Lee.

### STATEMENT OF J. C. AND R. JAQUES, WEST NEWBURY.

The crop of Indian Corn which we have entered for premium

grew on one acre of land. The soil is light loam. The crop of 1870 was hay. It was ploughed in the fall, and the manure (five cords to the acre) was ploughed in, in the Spring, about eight inches in depth. The land was marked off in rows three and one-half feet each way, and 300 pounds Bradley's Superphosphate put in the hills, and planted the 10th of May; cultivated each way twice, and hoed twice. The top stalks were cut about the 1st of September, and October 25th we commenced to cut and harvest, and finished October 30. The amount of corn raised was eighty-four and one-half bushels, eighty pounds to the bushel. Top stalks, two tons; butt stalks, three tons. One bushel of eighty pounds of ears was shelled and ground November 4th; the shelled corn weighed sixty-six pounds.

EXPENSE OF CROP.

| | |
|---|---|
| Cost of ploughing, | $9 00 |
| Value of manure on the ground, | 45 00 |
| Cost of superphosphate, | 9 00 |
| Cost of harrowing, | 1 00 |
| Cost of seed and planting, | 4 00 |
| Cost of cultivation, | 7 50 |
| Cost of harvesting and storing, | 18 00 |
| | $93 50 |

VALUE OF CROP.

| | |
|---|---|
| 84 1-2 bushels of corn, | $84 50 |
| Stover, | 65 00 |
| Manure in the land for future crops, | 22 50 |
| | $172 00 |
| Deduct expenses, | 93 50 |
| Net income, | $78 50 |

From actual measurement I hereby certify that the above crop covered one acre of land and no more.

M. W. Bartlett,

STATEMENT OF J. C. AND R. JAQUES, WEST NEWBURY.

The crop of Winter Rye which we have entered for premium grew upon one acre of land. The soil is light slaty. The crop of 1870 was hay—about one-half ton to the acre. It was ploughed in August, 1870. Three cords compost manure were spread upon it, and September 8th one bushel and one peck of rye was sowed and harrowed in. July 11th, 1871, it was cut and harvested; threshed and cleaned the middle of September. The amount of rye raised was thirty-six bushels and three pecks—56 pounds to the bushel. Straw, one and three-fourths tons.

EXPENSE OF CROP.

| | |
|---|---|
| Cost of ploughing, | $3 00 |
| Value of manure on the ground, | 18 00 |
| Cost of seed, | 1 62 |
| Cost of sowing and harrowing, | 2 50 |
| Cost of cutting and harvesting, | 5 00 |
| Cost of threshing and cleaning, | 5 00 |
| | $35 12 |

VALUE OF CROP.

| | |
|---|---|
| 36 bushels rye, | $45 96 |
| 1 3-4 ton straw, | 38 50 |
| Manure in land for future use, | 9 00 |
| | $93 46 |
| Deduct expenses, | 35 12 |
| Net income, | $58 34 |

From actual measurement I hereby certify that the above crop covered one acre of land and no more.

M. W. Bartlett, Surveyor.

## ROOT CROPS.

Five entries were made, one of Ruta bagas, one of Potatoes and three of Onions; one of these was subsequently withdrawn.

We found it impossible to bring the Committee together at

a given hour, living as they did on several lines of railroad, without considerable loss of time to one or more members of it. We therefore suggest, that as far as it can be done without sacrificing more important considerations, the Committee on Roots be made up of members residing in towns along the same line of road. From the fact, that in one instance, after visiting the crop entered, the land on which it grew proved to be of too small area to answer the requirements of the Society, the Committee have also recommended that for the future the area of the land be ascertained before the crops are entered and be given to the Committee at the time of entering.

The crop of Potatoes by Mr. Winkley was of one of the new varieties, raised by Mr. Albert Bresee, of Vermont; and known as No. 6, or Peerless. This crop, as will be seen in the accompanying report, was enormous, being at the rate of nearly 422 bushels to the acre. In yield, No. 6 is fully equal to the famous Harrison, while in quality it is much superior; though hardly equal, I think, to its elder brother, the Early Rose. It is remarkable that so heavy a crop should be grown with only the residue of the manure left by the crop of the previous year, to feed on; perhaps this may suggest an improvement over our usual way of manuring the same season we plant, when we have a strong clay loam to deal with; which, as we all know, is very retentive of manure. Perhaps our usual method gives us too much top to the sacrifice of tubers.

In the footing up of expenses, friend Winkley makes the usual error of underestimating his labor. As a farmer, I should be loth to take the contract of giving a crop on 128 rods, the two hoeings and accompanying weedings it would require, for a less figure than fifteen dollars. Again, with all the aid possible from modern implements, I could not dig and put into the cellar such a crop, with the picking of it up, which would be involved in the operation, for a sum *less* than fifteen dollars; and with the common method of digging with the hoe, not even for that figure. But I assume that a man who had the enterprise to plant so largely of No. 6 dug his potatoes with

more or less aid from the plough. I find Allen's potato digger, which is a modification of the double mould board plough, a capital labor saving implement in potato digging. When I first tested it I feared it would bruise the potatoes badly; but to my surprise it did not on the average bruise one to a cartload. I have had it tested on good loam, on rough, ledgy hillside, and on bog meadow; it did the best of work, and about equally well in each instance. I put two good hands digging beside it on bog meadow, and found that with one person to drive the horses and one to hold the machine, it did the work of twelve men, cutting and bruising next to no potatoes, while the best of diggers will always cut more or less, and some hands a quarter of what they dig; particularly if the potatoes are of large size and long in shape. I had fear lest a large portion of the crop would be covered by the earth thrown up by the machine; but by digging every other row on the piece and teaming them off before the remainder of the piece is dug, there are certainly no more lost, and probably less, than by common hand digging. The implement requires two horses and can be readily managed by any man who ever held a plough. By careful figuring I found I cleared its cost every two days, when in use. I confidently advise every farmer who grows an acre of potatoes in drills, to buy one of these diggers. The price is sixteen dollars; it can be procured of Ames & Co., and probably other dealers in Boston.

Patrick Kieley raised a very nice crop of Ruta Bagas, for table use, which appeared to be of the London Swede variety. I must take issue with him on some of the details of the cost of raising the crop:— Should not want to contract to plough a half acre of land three times and harrow twice, for less than twelve dollars; and could not spread butter very thick on bread at that price.

The Onion crop of Mr. Joseph N. Rolfe was worth going a long journey to see. Of the Danvers variety the strain was rounder than is usually grown, running almost into the "goose egg" shape, a kind that gives the largest crop when you get

them ripe; but are only safe in a very dry season, in a wet season failing to bottom down, and giving a large crop of scallions. Mr. Rolfe has a noble ambition as a farmer, and aims yet to raise his thousand bushels of merchantable onions to the acre; but I would not advise him to run this strain of onions; his land is a clay loam, having a sandy sub-soil. I think that a wet season would be more apt to give scallions on such a soil with this strain than a crop of marketable bulbs. The tops of this crop were two and a half to three and a half feet in length, measured as they lay in a dense, dry mass, almost covering the ground. Now every onion grower knows what would have happened with onions having such tremendous tops, had the season proved a wet one towards its close instead of remarkably dry. To ascertain the quantity of the half acre three rows were taken, the middle row and one at each end. These were pulled and topped on the ground, and then weighed; and the yield as thus determined was at the rate of one thousand and ninety bushels to the acre. As the crop was somewhat green, the onions not being very hard, though the necks were well dried down, the Committee arranged with Mr. Rolfe to receive a report from him of the actual weight of the crop when marketed. It will be seen by the report of Mr. Rolfe that the yield of the crop was 970 bushels to the acre. This is a remarkable crop, worth a journey of thirty miles to see. With Mr. Rolfe's figures of the cost of his crop I nearly agree, but shall put the cost of cultivation a little higher. I find Holbrook's Double Wheel Hoe quite an improvement on the common wheel hoe. It can be run much nearer to the growing crop, and thus saves a great deal of hand weeding.

The members of the committee who visited the onion crop of Mr. Noyes of Middleton found it to be of superior quality, the onions being of excellent size for market, very hard and well ripened, necks small, with not a pocketful of scallions on the half acre. To determine the amount of the crop, three rows were taken, one at each end of the half acre and one in the middle: these were pulled, topped and carefully weighed,

and assumed to be the average of the entire crop. The crop of Mr. Noyes was in excellent condition for marketing. I can hardly agree with friend Noyes as to the cost of raising his crop. Adding the cost of topping the onions, I cannot make it figure less than one hundred dollars, on the assumption that he used but three cords of manure to the half acre, which I understand is his statement. The great difference between my figures and his is in the cost of cultivation. There are peculiarities worth noting in the management of Mr. Noyes and Mr. Rolfe. Mr. Noyes did not plough his land in the spring, and ploughed under nearly all the manure in the fall. Mr. Rolfe harrowed his manure in. Mr. Rolfe's soil was, as seen by the committee, a clay loam, quite free from gravel at the surface; on such soils manure could be more safely harrowed in than on lighter soils, as the moisture they retain helps to rot the manure, and thus the surface is not dried so readily as on gravelly soils, to the detriment, sometimes, of small seed, in their vegetating and in their subsequent growth. Again, a wet, heavy soil, in early spring, manure harrowed in just below the surface, serves to underdrain the land of superfluous moisture, and thus favor the vegetating and early growth of seed.

In West Newbury we found ourselves in a community where the art of farming had been handed down from father to son for five and six generations. Back from the farm-house of this generation stand the houses dwelt in by past generations,, there being usually three on each homestead, the relics of antiquity doing service as out-buildings. Three or four generations dwelt under the hospitable roof of Mr. Rolfe, from the aged grandfather—aged ninety-two, with all the vigor of three score and ten yet upon him—to the energetic young man just girding himself to walk in the steps of his ancestor, and maintain the honors of his house. Mr. Rolfe informed us that there had not been a farm sold in the neighborhood as far back as his memory ran. All honor to Newbury Old Town! What a wealth of association rises in one's mind as he looks around on these ancient homes. I would sooner live in a log cabin, surrounded

by these associations, than to exist in the finest palace in the land without them. When will our irreverent Yankee mind give an English meaning to that richest of words, "Home?" It exasperates me when men talk of leaving the community where they and their ancestors before them were born and reared, merely because they may be able to better their condition pecuniarily? Nature oftentimes punishes this irreverence severely. Of the scores of families who have left home from my native town to settle in the far West, in the last thirty years, with barely an exception all who had sufficient means at command returned, having realized in their absence that "Home" was more than merely an abiding place.

Our friend Merrill made a general entry of vegetables, but after the sad misfortune that befel members of his family at the Revere accident, withdrew it. A member so prominently active heretofore is greatly missed; he has the heartfelt sympathies of us all in his great bereavement.

The committee have made the following awards:

For best conducted experiment in raising Potatoes, diploma and $10, to Paul T. Winkley, of Newburyport.

For best conducted experiment in raising Ruta Baga, diploma and $10, to Thomas Saunders, of Hamilton.

For best conducted experiment in raising Onions, diploma and $10, to Joseph N. Rolfe, of Newbury.

The committee would likewise recommend that a gratuity of $10 be awarded to A. P. Noyes, of Middleton, for his superior crop of onions.

For the Committee—James J. H. Gregory, Chairman.

### STATEMENT OF JOSEPH N. ROLFE.

The half acre of land upon which the onions were grown that I offer for premium, is a dark loam, with a clay sub-soil. It was planted with onions the two previous years. The land was ploughed about six inches deep, the manure was spread

on after plowing (harrowed in with a common tooth harrow), at the rate of nine cords per acre: sowed about the 13th of April, in drills 13 1-2 inches apart, using four pounds of the Danvers yellow seed per acre. The ground was hoed seven times with a wheel hoe, and weeded four times. The crop was pulled the 12th day of September, and topped on the ground. The manure used consisted of a compost of horse, cow and hog manure.

| | |
|---|---|
| Cost of manure on half acre, | $45 00 |
| Cost of preparing the ground, | 6 00 |
| Cost of seed and sowing, | 9 00 |
| Cost of cultivation, | 20 00 |
| Cost of harvesting and topping, | 20 00 |

The crop on the half acre, when measured and averaged by the committee, was 545 bushels. The weight, when sold, was 25,220 pounds: making 485 bushels, or at the rate of 970 bushels per acre.

### STATEMENT OF A. P. NOYES.

Please find statement in regard to a crop of Onions raised by myself:

The one-half acre of Onions I entered was measured by the two members of the committees on root crops who visited my farm. They also measured and weighed two rows that would be a fair average, and estimated that they measured at the rate of 445 1-2 bushels to the half acre. The crop of 1870 was onions, manured with six cords of barnyard manure per acre, spread and ploughed in the fall of 1869, nine inches deep. In the spring of 1870 I spread on about sixty bushels leached ashes, harrowed through with a tooth and brush harrow. Last fall I spread on about six cords of stable manure, and ploughed it in about eight inches deep. This spring I harrowed in about three cords of salt sand to the acre. (By the way, I bought this salt sand for muscle bed, and I really think that my land

would have been in as good a condition if I had used ten bushels of salt per acre instead, and saved some hard teaming and some money.) I sowed with seed sower about the 1st of April, with Danvers yellow onion seed, at the rate of four pounds to the acre. The ground was hoed and weeded three times. The onions entered for premium were pulled about the 5th of September, and I don't think I had half a dozen scallions in the bed. They were fit for topping in a few days after they were pulled.

| | |
|---|---|
| Value of manure on half acre, | $35 00 |
| Cost of ploughing, harrowing, etc., | 5 00 |
| Cost of seed and planting, | 10 75 |
| Cost of cultivation, | 18 00 |
| Cost of harvesting, | 12 00 |
| | $80 75 |

I take pleasure in saying that the seed I have bought of you has always proved to be good. Yours truly,

A. P. Noyes.

J. J. H. Gregory, Esq.

## STATEMENT OF PAUL T. WINKLEY.

Gentlemen,—The land on which the potatoes grew which I enter for premium, was in grass in 1869 and had been for sixteen years. Last year we put on forty ox cart loads barn manure, and plowed in about six inches deep, and planted it to corn in drills for cows when green. The land is what we call clay loam. Last spring it was plowed about six inches deep and planted with Peerless potatoes, with no manure, in drills about three feet between rows and fifteen inches apart in the drills, cut in pieces with two eyes in a piece.

The crop is 340 bushels, 60 lbs. to the bushel, on 128 49-100 rods.

Cost of cultivation and seed :

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|---|---|
| Ploughing and harrowing, | $5.00 |
| Planting, | 5.00 |
| Hoeing, | 10.00 |
| Digging and putting in cellar, | 10.00 |
| Three barrels seed, bought in Vermont, | 30.00 |
| | $60.00 |

They were planted April 19. They are late potatoes and should be planted early; but they are most excellent table potatoes, and great yielders.

I certify that I have this day measured a lot of land for Paul T. Winkley, Esq., of Newburyport, entered by him for a premium on potatoes, and find the same contains one hundred and twenty-eight rods and forty-nine hundredths.

Dated at Newburyport, September 23d, 1871.

JOSEPH G. GERRISH.

### STATEMENT OF THOMAS SAUNDERS.

The crop for the last five years has been English grass, the land gravelly and light on a side hill, manured with a compost of meadow mud and barn manure, made in the cellar and consisting of four parts of the former and one of the latter. Ploughed the first time in November, 1870, just as light as the sod could be turned, say from three to four inches deep. In June cross ploughed, just the same depth as before, then harrowed, then ploughed again and harrowed again, finishing June 20th.

| | |
|---|---|
| Cost of 3 ploughings and 2 harrowings, | $6.00 |
| " of 3 1-2 cords of above compost, | 21.00 |
| " of labor and team in hauling and applying same, | 6.00 |
| " of seed, | .55 |
| " of cultivating and weeding, | 7.00 |
| " of harvesting, | 9.00 |
| Total cost of manure and labor in cultivating and harvesting crop, | $49.55 |

Amount of crop 327 1-4 bushels (at 60 lbs. per bushel) suitable for market, and worth there 50 cts. per bushel $163.-67 1-2.

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## STRAWBERRIES.

Report of Committee on Strawberries and other small fruits:

The only statement presented was by B. F. Huntington, of Amesbury, in regard to *Strawberries*.

This statement falls short of the requirements in some minor particulars, but is such as in the judgment of your Committee deserves the premium offered, which we therefore award him.

We wish to say that this Committee did not view the premises, but his character for veracity and uprightness is such that we feel no hesitancy in awarding the premium as aforesaid.

Accompanying this report please find said statement.

Committee—Wm. Willcomb, J. S. Preston, John L. Robinson.

### STATEMENT OF B. F. HUNTINGTON, OF AMESBURY.

The crop of Strawberries which I present for premium was raised on thirty-two rods of land, the present year, which was an old onion bed, and had been manured for that crop with stable manure. No manure was used for the strawberries but leached ashes. The plants were set in the spring of 1870.

| | |
|---|---|
| Sold 1425 boxes at an average price of 24 26-27 cts., | $355.72 |
| Sold 4000 plants, 50 cts. per hund., | 20.00 |
| Sales, | $375.72 |

Expense of cultivation:

| | |
|---|---|
| 50 bush. ashes, | $10.00 |
| 11 days work setting plants, weeding, etc., | 16.50 |
| Team, | 1.50 |
| Picking and packing, | 42.75 |
| Marketing, | 10.00 |
| Plants, | 10.00 |
| Interest and taxes on land, | 6.00 |
| Total expense, | $96.75 |
| Balance in favor of crop, | $278.97 |

NOTE.—The above crop, viz., 1425 boxes on thirty-two rods, equals 7120 boxes per acre, which at the price received would amount to a product of $1787.36 per acre.

The variety was the Wilson's Albany, which I have cultivated for ten years. I have also raised many other fancy sorts, as the Triumphe Degand, Russells, Jucunda, Agriculturist, etc., and have discarded all for the Wilson's, as that strawberry brings as much in our market, as a better one does, and bears more than double any other variety that I ever tried. The plants were set in the spring, about the first of May, in two rows, two feet apart each way, then leaving a space of three feet, then two rows more, and so on, allowing the plants to run into the three feet space, and then the next spring taking them out for plants to set or sell, and in so doing leaving a path between each bed, which makes it convenient for picking.

The runners were trimmed twice at the first of the season and allowed to grow the rest of the season, though in this I think I made a mistake; this year I allowed the *first* runners to grow, thus securing *stronger plants* for next year's bearing, and trimmed the later runners. It is my opinion that we get more and better fruit in this way than in strictly hill culture, as in hill culture I have sometimes had three hundred berries on a single plant, almost always two hundred to two hundred and fifty, and

the plant is not strong enough to carry out so many berries to a suitable size. In regard to mulching and covering, I use pine leaves (tassels) from the forests, the cost of which is the labor of collecting them, which in my statement is put in with the cost of labor.

This year I shall put the pine leaves on them, some salt grass on top; for the past two winters have been hard for the plants, unless well protected. I take about one half the leaves off in spring, leaving the rest on as mulching, which serves a good purpose in keeping down weeds, and keeps the fruit clean, though making the crop three to four days later in ripening.

When Mr. Robinson states the cost of picking and packing is less than three cts. per box, I think he makes a mistake. If I remember right, in my statement it is just three cts. per box, one thousand four hundred and twenty-five boxes, at three cts. makes $42.75; though this season it cost me less for picking than some other seasons, owing to size and thickness of the berries. A hand could pick seventy-five boxes per day on an average, making at two and one half cts. per box, $1.87 per day; and I have had a hand pick one hundred boxes per day in the best picking. My own folks did the packing, which I estimated a one half cent per box. One hand by working all day could pack two hundred boxes, making one dollar; though in former seasons when I have hired, I have paid more than that, about one ct. per box. I think the subsoil is a moist loam, with the soil not over ten inches deep. The general price paid for picking in this place is three cts. per box.

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## TREADWELL FARM.

The Committee on the Treadwell Farm report that at a meeting in May, at the farm, the committee examined the meadow muck which Mr. Gould had dug the previous fall

agreeable to there quest of the Committee, in order to test its value upon the plain land on the farm. It was found to be of a very coarse, porous quality, tough in its fibre and of very little value for fertilizing purposes; therefore do not urge its further use.

The grass fields that had been newly laid down or top-dressed, were looking very well, while the older grass fields were quite feeble in appearance.

The farm has produced the same quantity of hay this year as last, i. e., thirty-five tons. Four acres of winter onions yielded seventy bush. A half acre of onions, very heavily manured, produced one hundred bush. of very large specimens. Owing to the drills being double the distance apart that they should have been,—the sowing having been left to an inexperienced man,—the crop was but half as much as it would have been under proper direction. This, with another half acre for early vegetables, composed all the land devoted to hoed crops.

Mr. Gould's plan now is, to apply the manure principally to top dressing for grass. The farm has certainly improved very much in the amount of products, under the terms of the lease, which Mr. Gould has faithfully performed: but it is believed that with a different and better quality of land, very much greater results would have been realized.

For the Committee—Benj. P. Ware.

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## ESSAYS AND REPORTS.

The Committee of the Essex Agricultural Society on Essays, Reports and Farm Accounts, award for Essays:

To Francis H. Appleton, of West Peabody, for his Essay "On Improving Our Society," diploma and $15.

To Chas. J. Peabody, of Topsfield, for Essay on "Farming as an occupation," second premium of $10.

To Frank H. Palmer, of Boxford, for Essay on "Utility of Birds to Agriculture," third premium of $8.

To Ben. Perley Poore, of West Newbury, for Report on "Farms," diploma and $10.

To Ashael H. Patch, of Hamilton, for report on "Agricultural Implements," second premium, $8.

To Joseph How, of Methuen, for Report on "Dairy," third premium, $6.

None of the accounts submitted to the Committee seemed deserving of the premiums offered for "Farm Accounts." A Farm Account should comprehend all the items of income and and expense, and so balance them that the profit or loss from the entire farm business of the year can be ascertained. For this purpose the mere collection of the statistics of the results of cultivating the different fields on the farm, or of raising particular crops, will not be sufficient,

Daniel E. Safford—Chairman of the Committee.

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## LIBRARY.

The Committee on the Library, would report:

That very little interest is manifested in its success by the officers and members of the Society. That no appropriations have been made for several years, for its improvement and growth. The additions have consequently been few and unimportant, and the circulation small.

This apparent indifference may be attributed in a great measure, to the following circumstances: 1st. The members are scattered throughout the county, and very few can avail themselves of a library, if placed in any locality. 2dly. The formation of public libraries, in many places supported by income arising from invested funds, or from municipal appropriations: these libraries are well supplied with books of value and interest to all readers. 3dly. The multiplicity and cheapness of agricultural papers, and the prevailing practice of many of the

political, religious and other papers, devoting some space to agricultural matters.

In view of these considerations, the Committee deem it inexpedient to have a circulating library and add thereto the popular agricultural literature of the day; but would recommend the propriety of establishing a library of reference, and obtain works of standard authority on agricultural and collateral subjects; also the publications of the various agricultural societies and boards of agriculture, not only of this country, but of Europe and elsewhere.

The library contains many valuable works, which would form a good nucleus for this purpose.

To this end a small annual appropriation, and the establishment of a system of exchanges with kindred societies, would be necessary. This last can be done through the Smithsonian Institute, at a comparatively trifling expense.

Grant an appropriation and place copies of the transactions in the hands of a committee, or some officer that will attend to this special duty, and the Committee feel confident that, with the zealous cooperation of the officers and members, a library would in a few years be formed, of great value to the people of this county; and would very materially aid in promoting agricultural knowledge and advancing the interest of this portion of our citizens.

Committee—Henry Wheatland, John M. Ives.

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## SUGGESTIONS OF MR. ALLEN W. DODGE.

(PUBLISHED BY A VOTE OF THE SOCIETY.)

At a meeting of the trustees held at Plummer Hall, Salem, on Nov. 15th, 1871, the following gentlemen were present:

William Sutton, George B. Loring, Benj. P. Ware, Ed-

ward H. Payson, Aaron Sawyer, Aaron Dodge, Allen W. Dodge, Joseph How, Eben G. Berry, E. K. Lee, Sherman Nelson, David W. Low, Levi Emery, Josiah Newhall, Joseph S. Howe, J. J. H. Gregory, Paul T. Winkley, J. D. W. French, Samuel C. Pitman, Alonzo B. Fellows, and Chas. P. Preston.

The following Suggestions to the Trustees, in relation to nominating Committees, were adopted:

1. That they nominate only such persons as are known to them to possess the requisite qualifications to serve on the Committees for which they are severally nominated.

2. That they nominate only such persons for committees as they have reason to believe will serve on the same, and for chairmen only such as will prepare a report.

3. That, having in view the interests of the Society, as well as of the towns which they severally represent, they nominate no larger proportion of its citizens for committees, than it is fairly entitled to.

4. That they report at the meeting of Trustees next following any exhibition, the names of all persons nominated by them respectively, that failed to attend to the duties assigned them, with the reasons therefor, so far as known to them.

# ESSAYS.

## IMPROVING OUR SOCIETY.

By Francis H. Appleton, of West Peabody.

As this is a subject for which many County Societies offer special premiums, as an essay, I have written the following, hoping that it will be well received.

Many members of our Society appear to be perfectly satisfied with the present system which governs the annual Shows and the awarding of premiums; and on the other hand, there are many members who wish to see the Society continually making more improvement year by year. It could only be a selfish motive that would prevent the former from encouraging the wish of the latter; and where the object of any Society should be to advance the welfare of the community, as is the case with this Society, all selfish motive should be banished.

Again, it is fair to assume that all members of the Society wish to see it as successful as possible in whatever it undertakes; and as we all know that *everything* is capable of improvement, we must admit that our Society must come under that head. I speak in this way, because, as we must all know too well, there are some among us who obstinately close their

ears to the voice of improvement, and who believe in "letting well enough alone," as they say. But should this motto ever be adopted, no advances would be made, and a state of stagnation would be the consequence, which could only result in decay and loss of influence. Our good old Society is far from this state, but is capable of much improvement. All possible improvement cannot be made at once, but must be done step by step, and the longer the steps the more shall be accomplished.

I am going to suggest some improvements that occur to me, and give my reasons for so doing, in the hope that they will be adopted, and that others will do likewise and suggest such improvements as occur to them. With live, but cautious, men to lead us, we cannot fail to advance the welfare of the community around us, which should be our object.

Why is it that the premiums are not awarded until late the second day of the Show, after the annual dinner is finished, at which time a small number of those interested surround the Secretary's chair to hear him read the long list? whereas, each one of the members would be better pleased to have had the premiums so awarded that the prize articles could be known and examined by those visiting the Show and compared with other competing articles. The names of individuals to whom premiums were awarded for excellence in ploughing in its various classes, etc., must necessarily be made known at about the same time as at present.

According to the present system the premiums are not awarded until the time arrives for taking the animals off the ground, whereby the people are unable to examine the prize animals, and thus profit by observing their points of excellence; and the owners of animals, who are desirous of getting their stock home early, are thus unable to examine the premium articles at the tent and halls of exhibition; and no one can find such articles without much inquiry, as no means are provided for designating them.

Would it not be a good plan to instruct the committees to fill out their books immediately after making their awards, on

the afternoon of the first day of the Show, and at that time to attach to every premium article, and each pen containing a prize animal, convenient printed cards to be furnished by the Society, designating what awards each is entitled to? This year I entered two animals under a committee, and both received awards, but neither the Secretary nor myself know which of them received the higher award; the committee made no specifications, although they fully understood the names of each animal. In examining the premium cards in the various classes, many worthy articles would be thus seen, which would otherwise be unnoticed by the visitors.

By this plan the Secretary can be freed from the troublesome tameness of reading so long a list of awards. According to the present system, many competitors are often obliged to wait for the publication of the Premium List in some county paper the week following the Show, before they can ascertain what awards they are entitled to. The premiums awarded for success at ploughing, drawing, etc., which are necessarily awarded the second day of the Show, the Secretary could continue to announce at the dinner; or they could be posted up in a conspicuous place at the Show. This system would benefit all the visitors very much.

Many individuals who have served on Committees of our Society, myself among the number, having complained of the difficulty of finding the articles or animals entered for competition, on account of the incompleteness, illegible appearance, or sometimes entire want of any card attached to what has been entered under their committee, I would suggest in this connection, that when any entry is made to the Secretary, a printed form, upon which shall be written the name of article and under what class entered, be given to the person making the entry, and which shall be attached to the article when placed on exhibition. These printed forms will both serve as a check for the entry, and be of very great value to the committees.

I have also some words to say in regard to those departments on the Premium List in which I take most interest. I refer-

to the premiums offered for Bulls, Milch Cows and Heifers, and the appointment of the committees to award them; and shall speak particularly of the thoroughbreds, as the others seem to be well provided for.

Among the bulls, the Jerseys, Ayrshires, Short-horns, Devons and other recognized breeds are all placed under one committee, and the same may be said of cows and heifers. It is specified that these "must have been owned by the exhibitor four months previous to the Exhibition," and that "competitors are required to give pedigree, and committees are requested to be particular in this respect." These specifications are excellent, and should be followed to the letter with every thoroughbred animal, as no animal is thoroughbred without an authentic pedigree, but I fear this is too seldom done.

The type, or points, of an Ayrshire are different from those of the Jersey, Short-horn and others. The thoroughbred Ayrshire is noted for a large yield of milk, and for the power of transmitting that quality to its descendants. The thoroughbred Jersey is noted for a smaller but very rich (butteraceous) yield, and the power of transmitting it. The thoroughbred Short-horn is noted for its capability of taking on fat, and there are some animals of this breed that are also very good milkers.

Now let me ask my readers how *one* committee is capable of *justly* awarding premiums to these four, or more, entirely distinct breeds of cattle? Among thoroughbred milch cows it is not only necessary to ascertain which animal can give the most milk, but which is the best for breeding purposes.

Five men are now appointed upon most of the committees, and probably only three or four will be present; let us say four men serve on the committee, the chances are that three of the men respectively know the points of an Ayrshire, Jersey and Short-horn tolerably well, while the third knows little or nothing about cattle, which is making the best of it we can. The committee, in examining the stock, come to the pens of Ayrshire bulls; they all examine the bulls, and then three of them look to the other man, who knows most about Ayrshires, and

ask him what his opinion is, and, after hearing it, they are very apt to award the premiums according to his advice, or else they adopt their own opinions of what they know little or nothing, and award the premiums accordingly.

It is next to impossible for any County Society to find *one* committee that will be capable of judging of all the various breeds of cattle that may be exhibited at a Show. In the list of premiums issued by our Society this trouble occurs in the Bull, Milch Cow and Heifer classes. To simplify matters, I would recommend that each committee on cattle consist of three members only.

No premiums are at present awarded to the following thoroughbreds :—Bull-calves, three-year-old heifers, that have never been in milk, two-year-old heifers, yearling heifers and heifer calves. The milch cattle owned throughout the county consist chiefly of Ayrshires, Jerseys, Short-horns; Natives or Grades, and specimens of a few other breeds, and I would suggest that the following system of awarding premiums to Bulls, Milch Cows and Heifers, be adopted in place of that now in use :

## PREMIUM LIST.

TO BE AWARDED AT THE SHOW.

### Ayrshires.

Bulls, two years old and upwards, 1st premium, diploma and $10; 2d do., $5.
Bulls, under two years old, 1st premium, $5; 2d do., $3.
Milch Cows, four years old and upwards, 1st premium, diploma and $10; 2d do., $5.
Milch Heifers, under four years old, 1st premium, diploma and $10; 2d do., $5.
Heifers, one year old and upwards, that have never calved, 1st premium, $5; 2d do., $3.
Heifer calves, under one year old, 1st premium, $4; 2d do., $2.
*Committee :*—(Three members to be definitely appointed before the Show.)

### Jerseys.

Same premiums as for Ayrshires.
*Committee :*—(Three members to be definitely appointed before the Show.)

SHORT-HORNS.

Same premiums as for Ayrshires.

*Committee:*—(Three members to be definitely appointed before the Show.)

NATIVES, OR GRADES.

Milch Cows, four years old and upwards. 1st premium, diploma and $10; 2d do., $5.

Milch Heifers, under four years old. 1st premium, diploma and $10; 2d do., $5.

Heifers, one year old and upwards, that have never calved, 1st premium, $5; 2d do., $3.

Heifer-calves, under one year old, 1st premium, $4; 2d do, $2.

*Committee:*—(Three members to be definitely appointed before the Show.)

OTHER THOROUGHBRED STOCK.

Same classification to be used as with Ayrshires.

Premiums to be awarded at the discretion of the Committee.

*Committee:*—(Three members to be definitely appointed before the Show.)

MILCH COWS.

Best Herd, of not less than five in number, to be exhibited at the Show; and a correct statement of manner of keeping and yield of milk for the six months preceding to be given, 1st premium, diploma and $15; 2d do., $10; 3d do., $8.

Best Milch Cow, either thoroughbred, native or grade, with satisfactory evidence as to quantity and quality of milk and manner of feeding, 1st premium, diploma and $15; 2d do., $10; 3d do., $5.

*Committee:*—(Three members to be definitely appointed before the Show.)

NOTE.—All animals entered under the preceding classes must have been owned by the exhibitor four months previous to the Exhibition. Competitors are required to give pedigree of all thoroughbred stock, and committees are required to be particular in this respect. A written statement will be required of the age and breed of the cows, and time they dropped their last calf, and when they will next calve: the kind, quantity and quality of their food during the season, and the weight or measure of their milk morning and evening, of each of the first ten days in June and last ten days in August. No awards are to be made to animals that are unworthy of them.

(I have substituted above "last ten days in August" for "first ten days in September," as it is at present, in order to keep the milk-record before the falling off in milk, caused by attending "New England," and other Fairs.)

When other thoroughbreds than Ayrshires, Jerseys and Short-

horns, that are worthy of being encouraged, are known to be in the county in sufficient numbers, I would recommend that separate premiums be offered for them. Such breeds may now be in the county unknown to me, and, if so, I would have separate premiums offered at once. Not knowing the exact yield, cost of keep, etc., of the Kerry cattle, and how numerous they are in the county, I cannot personally recommend them. It would be useless to appoint separate committees for each of the other thoroughbreds, which are very seldom, if ever, seen at our Shows at present, but I would have the Society be liberal in any awards that will tend to extend the Show, and elevate the standard of farming throughout the county.

The officials in charge of the cattle-pens at Ipswich this year did all they were advertised to do promptly; but somebody was at fault, in that, being obliged to stay in Ipswich the greater part of the night after the Show waiting for the freight train, I was unable to get any hay for my cattle, except after no little trouble and difficulty in searching for some place where I could buy it. The Society ought to provide for an emergency of this sort, as this fact might deter some people from exhibiting their animals, who otherwise would do so.

There are but few herds of thoroughbred animals of each of the various breeds in the county, and the owners of these animals are almost the only persons in the county who are capable of judging of the merits of their respective breeds. But if all the owners of the various breeds are to send representatives from their herds every year—and we must all hope that the inducements will yearly be such that all will send animals—the owners of these cattle cannot, of course, serve on the committees; and to have unprejudiced judges who fully understand what is required of them, we must ask intelligent breeders of thoroughbred cattle outside of the county to act as our judges.

No one can be a good judge of any breed of animals, unless he is well acquainted with a large number of herds throughout the country, and has carefully studied the characteristic points of both imported and home-bred animals of note. I really

believe there are but few persons in this county, or this State even, who know what the pedigree of a thoroughbred animal should be, judging from my experience in examining the animals, and conversing with many farmers, at our largest Fairs, both in this State and in New York.

To be a thoroughbred of any breed, an animal must have an authentic pedigree showing that it has no blood in its veins except that which has come from animals raised in the country where such breed originated, or that which has come from animals having such authentic pedigree.

Any animal that has not such a pedigree is simply a Native or Grade, and should be entered as such; and unless this Society enforces its present rule, which requires competitors to give pedigree, and requests committees to be particular in this respect, it is useless to offer such a long list of premiums for thoroughbred animals. As long as committees on thoroughbred cattle are appointed who know little or nothing about that of which they are to judge, I would advise all owners of thoroughbred stock to withhold their animals from entry for premiums, and not trust them in the hands of incompetent committees. If a good system cannot be otherwise brought about, this is the best and quickest way it can be done. But without resorting to such a radical method, it can be much better brought about by the trustees of the Society giving the matter that consideration which it deserves, and remedying the fault at once.

With an ample premium list, and competent and unprejudiced judges carefully appointed, we shall in this particular have all any one can wish, and if other much needed improvements are also carried out, a most excellent Show must be the result. In a comparatively small community there are but very few persons who can be unprejudiced judges of another person's property, where such property is owned in small quantity throughout such community—as for example, thoroughbred cattle in Essex county; but where property is extensively owned in large quantities, there are many persons who are competent

and unprejudiced judges of such property—as for example, fruit in Essex county.

So much for the character of the committees that are to be appointed by our Trustees; and if it is certain that the men who are appointed on these committees will serve, it will be well and good. But unfortunately, according to the present system, there are many vacancies on the committees, which would not be the case if committees were carefully appointed.

Poultry is a branch of farming that is attracting much attention at present throughout this and neighboring States, and our county can boast of many fine birds, which are one of the chief features at our County Shows. The rivalry in this class runs so high that all chance of prejudice influencing members of the committee should be strongly guarded against; and if necessary, what objection would there be to asking persons outside of the county to serve on committees, if capable and unprejudiced judges can only be obtained in this way? None; and, as I have already recommended in regard to some of the cattle, this would be an excellent plan.

I think it would be better to divide the poultry into two classes, and place each class under a separate committee. At our last Show the Poultry Committee were nearly two days making out their list of awards on account of the large number of entries. This is too much time to ask any committee to give, and as the interest in poultry is on the increase, two separate committees should be appointed. Let the larger birds (Asiatic), and ducks, geese and turkeys, be in one class; and the smaller birds (non-sitters), which are more numerous than the larger varieties, be in the other; and this arrangement will simplify matters very much. It must also be borne in mind that new breeds are frequently coming into our notice, and our premiums should be carefully revised every year accordingly.

I passed all my time, days and nights, at Ipswich during the last Show, having both cattle, vegetables and butter from my own farm on exhibition, and being interested in the swine and poultry, so that the foregoing is written from my own personal

experience, after two days of careful observation. There are other subjects connected with the advancement of our Society which I shall hope to discuss at some future time, if others shall not have already done so to advantage.

P. S. Would not an arrangement like the following be a good one? Let the Trustees of the Society divide themselves up into committees of three persons on each; let each of these committees have a certain number of the classes for which premiums are offered allotted to them: and let each of these committees be responsible to see that the proper number of competent judges are definitely appointed, under each class allotted to them, before the Premium List is issued.

## FARMING AS AN OCCUPATION.

BY CHARLES J. PEABODY, OF TOPSFIELD.

In writing on this subject, I cannot give the experience of a long life as could many of my brother farmers. I bring an earnest love for the pursuit: and as my attachment to it has increased from childhood up, leading me to choose farming as my business, I offer some suggestions as to the best way of managing farm matters, with a consideration of some of the conditions of success in the occupation, and a discussion of a few of the more common objections to farming as a vocation.

When one selects farming as a *business*, he of course understands that as much money cannot be made as in many other pursuits.

I however believe that enough can be made to procure all things needful for a good living; so none need be deterred

from following it, if they understand the business, through fear of want.

If one is not *born* to the pursuit, it will take a long time for him to learn *all* about the care of the farm, or enough of the varied operations required to make it pay.

It has been well said, that probably no *mechanical* pursuit demands so much knowledge for its successful prosecution as farming.

This may at first seem strange, but when we think of the many things a farmer *must* know, such as the nature of the soil of different parts of his farm, and how to remedy any deficiency that may exist, so as to adapt it to the wants of the crops he wishes to produce; the methods of culture required by different crops; the most advantageous way of disposing of them; the care of stock and of farm machinery: for in these days of high labor, few can afford to do by hand anything that can be done by a machine, we have outlined a business that demands a mind clear and well-informed, a strong arm, and a stout heart.

Of the other conditions of success I should place first, a steady pertinacity of effort to make things better than they are, a man should have ever before him an ideal farm, perfect in all its appointments, to which his actual farm should be made to approach as nearly as may be.

This will keep him out of the ruts, and incline him to progress, in every department of his business.

One should also keep informed as to the relative value of crops he can raise, for at present great changes are going on in the prices of staple articles of farm produce, and he is wise who takes advantage of the market to grow those crops that will sell to the best advantage. At the time of this writing hay is worth in Salem $38 to $40 per ton, and corn can be bought for from $34 to $36 per ton. It does not require much reflection to see that it is much easier and more profitable to raise and sell hay, and buy corn for use on the farm, than to produce the corn.

Yet many men raise as much corn as ever, because they are accustomed to do it and dread to make any change. I think, however, that changing or neglecting to change in such matters from established customs must make a great difference in the profits of farming.

I would not imply that it is good policy for a farmer to sell much English hay; on the contrary it is undoubtedly the best plan to feed to stock kept on the place all the hay that is produced, and buy the grain in addition. Unfortunately, however, but few of us can do this: for we depend on the money received for hay to meet expenses.

Some few men, who can take city horses to board through the winter, combine the best points of both systems, obtaining the manure as a return for the care of the horses, and receiving about as much for boarding them as the hay consumed would bring in market.

A plan which I tried on a small scale the past winter gives me very good satisfaction, and furnishes a considerable amount of manure.

Finding in the fall that I should not be able to get horses to board to eat my surplus hay, I bought, in December, a few farrow cows and fatted them, selling them, after feeding from two to three months, at an advance sufficient to pay for all the hay and meal consumed.

Some plan of this kind must, I think, be adopted by many of us to keep up the fertility of our soil. If we can devise some system that will enable us to feed to advantage more than we raise, we shall succeed in greatly increasing the value of our fields and pastures, of which we have ample assurance, in the results obtained by the farmers of England, who have increased the average yield of wheat twenty bushels per acre by this process during the last few years.

Another requisite for the attainment of success is a strong faith. A farmer of all men is most dependent on nature for his bread, and he should manifest in his life the belief that "seed time and harvest shall not fail." We often hear men

expressing the opinion in some rainy time that the seed will rot in the ground; and again, when summer comes, that everything will dry up in the heat. Now we should be above all this, knowing from the experience of the past that an important crop is seldom cut off by any change of weather, and that any loss on one product is almost always made up on some other one.

And above this general faith in the operations of nature we should reverently trust Him "who giveth food to all flesh; for his mercy endureth forever."

There is yet a qualification to be mentioned, as important as any that has been named: which is the need of more information on matters of public interest than is possessed by farmers as a class.

Of course the men now on the stage of active life are not to be wondered at for this deficiency, as in their young days the facilities for obtaining such information were not nearly so abundant as at present.

It is therefore to the *young* men, who like myself, are just beginning their career, that I would speak. In these days, one must know something of events taking place beyond the limits of his own State, or country even, if he would take a position of importance in the community; and as we are so favored with good newspapers at cheap rates, there is no reason why any one should fail to be well informed in regard to the progress of events throughout the world.

If want of time to read is urged, I say that there are spare minutes enough in every week, if we will only save them, to give a large amount of reading when taken in the aggregate.

We will now consider some of the more common objections to farming as an employment. They are:

1. The hard toil required.

2. The small amount of money obtained for the labor.

3. The deprivation of social advantages enjoyed by the residents of cities.

4. The small opportunity afforded for acquiring distinction in any public capacity.

The first objection is the hard labor required. We think this is obviated in a great degree by it being nearly all performed in the open air, as it is generally admitted that one can perform a greater amount of work without injury, whether it be mental or manual, if he lives mostly out-doors.

The facts sustain this idea, for while we continually hear of men in all other pursuits having to give up business on account of failing health, it is almost never that we hear of a farmer suffering from such a cause. Then what other business is there where, taking six days in the week and fifty-two weeks in the year, the labor is not more arduous and less satisfactory than in farming.

I know that young farmers, as they work in the field, sometimes look with envy on the shoemakers, who finish their day's work in the middle of the afternoon, and spend the remainder of the day in base-ball or other sport. But if they watch these same shoemakers through the year, they will see that there is commonly a period of enforced idleness in the winter, that must do much to absorb the abundant and easily-earned wages of the summer; then if it were not for the name of sport the the ball-playing would be harder than haying.

The second point is the small amount of money obtained for the labor. To this the reply is, that money is valuable only for what it will procure, and as I have stated that it is generally admitted that enough can be procured to secure a good living, I shall now show some things for which the residents of cities pay large sums of money, which the farmer has without money and without price.

Almost every one enjoys looking at a fine picture, and in the homes of the wealthy pictures are regarded as absolutely essential to the furnishing of the house, and for them large sums are often paid, the masterpieces of our best artists frequently bringing more than would be needful to stock a farm.

So, in view of the pleasure to be gained from these and other

works of art, it is said one should choose an occupation that will give him the means to gratify his taste; but one whose life is passed among the constantly changing aspects of nature needs no *picture* to enable him to comprehend that a sunrise is beautiful. It does not require the skill of an artist to reveal to his eye the loveliness of the quiet valley among the hills, or the broad panorama which he can view from so many of the hilltops of old Essex.

And if one has a taste for animals, it is much more satisfactory to own the sturdy oxen, the quiet cow, or the fine horse, than to be able to buy one of Landseer's paintings of them; for the most that he or Rosa Bonheur can do is to paint to look like life. And what need has one, who can possess the originals, of the copies from life of even the most distinguished artists? So to every person who has a love for the beautiful, without the means to surround himself with pictures, I say become a farmer, and then "lift up your eyes to the hills," or, better yet, *live* on one and be satisfied.

We will now consider the third point, which is the deprivation of social advantages enjoyed by the residents of cities. If you were to ask what advantages farmers lose, the reply would most likely be lectures. Now, how about the lectures? The common opinion among well-informed men is, that as a means of education, they are valueless, if of the kind known as popular lectures; and if scientific, they are interesting only to a limited number, and whatever advantages they afford in a social way can be obtained by other methods.

In regard to concerts and other gatherings, while they afford much enjoyment, we think we are compensated in other ways. Said a minister to me once, when speaking on this subject, "You farmers have a chance to *think*, that those who live in cities fail to obtain."

In the present condition of society, and with the abundance of newspapers, there is no reason why the young farmer cannot be as well informed in regard to all matters of public interest as the young man in the city; and if the former will spend

his leisure in acquiring useful information from books, he will be probably the more intelligent of the two.

Fourth; The small opportunity for gaining distinction in any public capacity. It may be questioned whether this distinction is as enjoyable in possession as in anticipation, for we know "uneasy lies the head that wears the crown;" but if one has the ability to rise in public life, there certainly is nothing in farming as a pursuit to hold him back.

The history of this nation abounds in illustrations of this truth. From Washington down the line of presidents, and among the statesmen of the country, too, we find eminent names distinguished both for success in public life and for interest in agriculture. Webster's biography gives an account of the interest which he took in his farm, and some of his letters mention his oxen in a way which shows he had a true farmer's regard for his team. So, then, let us be good farmers, and if needed in any other place, have no fear but that we shall be called, "not to go up higher" (for we claim that an intelligent farmer is on a level with men in any other position), but to take a position of larger opportunity and wider fame.

At the present time, when so many young men are going West to settle, there is no doubt a temptation to many of us to follow their steps, and abandon these rocky hills for the fertile prairies of the distant States; but any who are inclined to go should ponder well before forsaking the old farm, for in looking at any new position, we are more apt to see a few obvious advantages, than to gain a just conception of things as they really are.

The dangers which beset the growing crops of Western men from insect foes are much greater than in this region, and the hardships which men undergo in establishing themselves on new land are so severe that it may be questioned if the money made by some of them would counterbalance the privation which they endure to get it.

So, all things considered, if one has a farm here, he runs a

great risk in going West or South with the expectation of improving his condition. So to my brother farmers of Essex, I say, what though

> "The Southland boasts its teeming cane,
> The prairied West its heavy grain,
> While sunsets radiant gates unfold
> On rising marts and fields of gold,"

still let us remain on these hills; and as our fathers drew from them bread, and as from this State have gone forth those who have in all the walks of life honored their birthplace, let us maintain a sturdy independence, endeavoring to make our farms better than when we took them,—to make ourselves better farmers and wiser men than any generation that has gone before, and so uniting in ourselves qualities which distinguished Lowell's hero, in his poem of "The Courtin'," than whom

> "None couldn't quicker pitch a ton,
> Nor draw a furrow straighter."

with those which Whittier has embodied in his young farmer, in "Among the Hills," of whom at an interesting period of his life he says:

> "Framed in its damp, dark locks, his face
> Had nothing mean nor common;
> Strong, manly, true, the tenderness
> And pride beloved of woman.
>
> "He has his own free, bookless lore,
> The lesson nature taught him;
> The wisdom which the woods, and hills,
> And toiling men, have brought him."

Let us produce in real life the ideals of the poets, and so hold an honorable position in the community, discharging all the duties that come to our lot with the faithfulness with which nature rewards our labor. And thus our beloved county shall be as widely known in the future, as she has been in the past, for the valor and enterprise of her sons, chief among whom shall stand the tillers of the soil, for we may ever remember

> "Honor waits o'er all the earth,
> Through endless generations,
> The art that calls the harvests forth,
> And feeds expectant nations."

# ESSAY ON THE UTILITY OF BIRDS TO AGRICULTURE.

BY FRANK H. PALMER, OF BOXFORD.

Better and more intimate acquaintance with the habits of birds, animals and plants, which are to be found in the vicinity of the farm, is the only way to appreciate the assistance nature is willing to render to the farmer; and the more educated and intelligent farmers become as a class, the more will they study the principles of growth and reproduction in the natural world.

It is an universal principle in the whole realm of nature that animals and plants live by the destruction of other animals or plants. So life is transmuted into higher life, and a chain of existence is formed, one link of which being broken, disastrous results are sure to follow.

Now nature, if left to herself, establishes this wholesome equilibrium between the feathered and insect tribes, viz: she produces no more insects than can be kept in check by the birds. But man, by his artificial habits, disturbs the proper balance between these tribes. By cutting down the woods, by disturbing the quiet of the forest by the sharp report of the gun, he destroys or drives away the birds, and thereby stimulates the production of insects, which become almost the greatest pests of the agricultural interests of the country. The extent of the evil caused by the infringement of these natural laws is easily demonstrated, first by reference to the undoubted facts of past experience, and secondly by showing what must surely follow the destruction of birds. It is estimated that at least 5,000,000 bushels of wheat are yearly destroyed by insects in the United States. 100,000 rose trees were lost by one florist in France, being destroyed by insects. Wilson says: "Would it be believed that an insect no larger than a grain of rice should silently and in one season destroy some thousand acres of pine trees, many of them from two to three feet in diameter and a hundred to a hundred and fifty feet high." And many other like instances of the destructiveness of insects

might be mentioned; but we pass to the consideration of what must follow the destruction of birds.

The reproductive energy of insects is truly wonderful. It is said that a single pair of grain weevils have produced 6000 young between April and August. The common varieties of aphides, or plant-lice, which are found on almost every kind of plant, are produced first from eggs laid the season before, and then through the summer: only females are developed. At the last of the season males and females both appear, and eggs are laid for the brood that hatches early in the spring. Reaumer says that one individual in one season may become the progenitor of six thousand millions. The silk-worm moth produces about 500 eggs: the great-goat moth about 1000; the tiger moth 1600: the female wasp at least 30,000. There is a species of white ants, one of which deposits not less than 60 eggs per minute, giving 3600 per hour. Such, then, is the enormous fertility of insects, and some of them breed several times a year, while most insectiverous birds breed but once a year, and then produce but four or five young. But nature has given to birds an appetite and an instinct which teaches them exactly when and how to go to work to capture and destroy insects and their eggs; and if the number of eggs produced by insects is wonderful, so the number destroyed by a single bird is marvelous. Bradley says that a pair of sparrows will destroy 3360 carterpillars in a single week. A young martin on a church spire, opposite our window, was visited five times in as many minutes by the parent bird, each time with an insect. A brood of partridges will nearly exterminate the denizens of an ant-hill in a single day. Woodpeckers are incessantly employed in ridding the orchards of insects and their eggs, which they skillfully discover under the pieces of dead bark. Robins, throughout the spring and summer, are continually digging for worms and grubs, which they find concealed beneath the surface of the ground. A day or two since we noticed a common chipping-sparrow capture a moth, and upon depriving her of it, we found it to be that of the common apple-tree caterpillar (Clisi-

ocampa Americana), so destructive to the orchards of New England. It is easy to see then, how, when birds, the natural enemies of insects, are destroyed and driven away, it will follow that insects will increase, and an increase of insects is synonymous with a decrease of crops.

But there are to-day many farmers in New England who do not believe that birds are beneficial. They occasionally lose a little corn by the crows, or a chicken by the hawks, and they judge the whole class of birds by a few such unfair samples. They drive the robins from the garden thinking they are pulling up the seed, and they take every opportunity to drive from the orchard the "sap-suckers," as they call the woodpeckers, thinking they are sucking the sap of the trees.

To correct such mistakes,—to induce farmers to study more the habits of birds, and to enable them more readily to distinguish the beneficial and injurious species, we shall give a brief description of some of the commonest birds of Essex county.

ACCIPITER COOPERII—*Cassin.*

COOPER'S HAWK.—This hawk is a common summer inhabitant of Massachusetts, being the smallest of those hawks known to the farmer by the significant name of "Hen Hawks." The nest is usually formed in the deep woods, almost always in a pine tree, in a fork near the top. It is constructed of large sticks and twigs, and lined with leaves of different trees: eggs, from two to four: color, a dirty white, with spots of brown and lilac, in some specimens distinct, in others the spots are very obscure. The breeding season in Massachusetts is about the 15th of May, but varies as the season is particularly late or early. This species is very injurious, as also the two following, partly on account of the havoc they make in the poultry-yard, but especially because they destroy a large number of small birds, which, if permitted to live, would do a great deal of good.

ACCIPITER FUSCUS—*Bonaparte.*

SHARP-SHINNED HAWK.—This species makes its appearance

about the 1st of May, and throughout the whole season is engaged in destroying small birds, which form a large part of its food, although it occasionally captures a field mouse of some sort. Audubon describes the peculiar flight of this bird as follows:—"While searching for prey, the Sharp-shinned Hawk passes over the country, now at a moderate height, now close over the head, in so swift a manner that, although your eye has marked it, you feel surprised that the very next moment it has dashed off, and is far away. The kind of vacillation or wavering with which it moves through the air appears perfectly adapted to its wants. It advances with sudden dashes, as if impetuosity of movement were essential to its nature, and pounces upon and strikes such objects as best suit its appetite, but so suddenly, that it seems quite hopeless for any of them to try to escape." The nest is usually placed in a pine, about twenty feet from the ground, and is constructed of sticks, and lined with small twigs and leaves. Eggs usually four, of a bluish-white color spotted at larger end with brown. They are usually laid by the last week in May.

### Buteo borealis—*Bonaparte.*

Red-tailed Hawk.—Mr. Samuels, in "Birds of New England," says, "Every one has noticed this hawk way up in the air at a considerable height soaring in extended circles, and uttering the oft-repeated cry, 'kae, kae, kae,' as he examines the earth beneath him for prey." I found a nest of this hawk in Boxford, Mass., on the 7th of May. It was situated in the topmost fork of a tall pine tree, being about twenty-five feet from the ground. It was a very large affair, constructed of coarse twigs and sticks, many of them as large as my finger. It was slightly lined with a few pine-needles and leaves of other trees. In the nest was only one egg, though the number generally laid is three. The egg was just hatching, the young hawk having broken the shell so as to protrude his beak. It must therefore have been laid by the 20th of April. This hawk is very destructive to small birds and to poultry.

CIRCUS CYANEUS—*Boie.*

MARSH HAWK, MOUSE HAWK.—This hawk is often seen in the orchards and fields, but especially in the meadows and marshes, where it captures a vast number of mice and moles, which constitute the chief part of its diet. As it destroys but few small birds, and never attacks poultry, it is regarded with considerable favor by the farmer. It is easily distinguished from other hawks, its habits being very different. It rarely utters a cry like the other hawks, but silently skims over the meadows in search of its prey. The nest is built upon a knoll in a meadow, and is formed of dry grass woven together, and slightly hollowed and lined with soft grasses. Eggs four in number, dirty-white in color, generally laid by first week of May.

PICUS PUBESCENS—*Linnæus.*

DOWNY WOODPECKER.—This woodpecker is the smallest we have, and is well known among farmers as a valuable agent in destroying the larvæ of insects which infest the orchard. At all seasons of the year, but more particularly during September and October, it may be observed busily at work destroying the eggs deposited on the apple trees by the "countless swarm of summer insects." This bird excavates a hole about twelve or fifteen inches deep, in a decayed stump or limb of a tree, in which the eggs are placed on a few soft chips left in making the hole. They are five in number, of a beautiful creamy-white color; they are usually laid by the 10th of May.

COLAPTES AURATUS—*Swainson.*

GOLDEN-WINGED WOODPECKER.—This is the most common of all our Woodpeckers, and any description of its habits seems almost superfluous. Both birds assist in excavating the hole which is to receive the eggs. This is often from fifteen to twenty inches deep. No nest is built, but on the bottom of the hole the female lays eight pure white eggs, which are about as large at one end as the other. If the eggs be taken from her, leaving one for a "nest-egg," she will continue to lay

more. An instance came to my knowledge where twenty-four eggs were laid in this manner before the bird could be induced to leave the hole which had been excavated with so much trouble. This bird is very beneficial to the farmer, as its food consists almost entirely of insects destructive to vegetation.

TROCHILUS COLUBRIS—*Linnæus.*

RUBY-THROATED HUMMING-BIRD.—How often do we see this beautiful little visitor in the flower-garden, at one instant pausing and thrusting its tiny bill into some flower, and then flashing out of sight like a meteor, and as suddenly reappearing. This bird is commonly supposed to suck the honey from the flowers when it thrusts its bill into them; but this is a mistake, since it is insectiverous, and is searching after insects, not honey. About the first of June the Humming-Bird begins to build. The nest is built of soft down taken from the stems of some of the different ferns. Eggs two in number, white in color, elliptical in shape. Period of incubation fifteen days.

CHÆTURA PELASGIA—*Linnæus.*

CHIMNEY SWALLOW.—Perhaps no other birds are so largely beneficial in their habits as the Chimney Swallow, for in every city, town, or village there are thousands of them throughout the summer engaged day and night in destroying insects. Afar up in the sky you can see them as well as low down close to the earth, and in mid-air just above the trees, everywhere, busily engaged in catching their insect food. About the 10th of May they commence building. The nest is placed in an unused flue of a chimney, and is built of mud and sticks glued firmly together and to the chimney with the saliva of the bird. This forms a firm structure, in which four or five eggs of a pure white color are laid.

ANTROSTOMUS VOCIFERUS—*Bonapaate.*

WHIPPOORWILL.—This bird is well known from its peculiar song, which is heard through the first half of the night during the mating and part of the breeding season. It arrives from

the South about the second week in May. In its habits it resembles the following species, and is very beneficial, as its food consists principally of the night-flying insects. This bird builds its nest, or rather lays its eggs,—for it builds no real nest,—on the ground near a log, or where some brush or leaves have collected. The eggs are two in number, and very beautiful, being a delicate shade of white, with spots and blotches of brown and lilac all over alike.

CHORDEILES POPETUE—*Baird*.

NIGHT HAWK.—This bird is about as common in the city as the country, being most often seen at twilight flying about just over the tops of the buildings in the city, and over the treetops in the country, uttering his short note or "squeak," as Mr. Samuels calls it. This species destroys great numbers of night insects. About the middle or last of May the Night Hawk commences the duties of incubation, laying two eggs on the bare ground, often on a rock, with no nest. They are a dirty-white color marked with spots of brown.

TYRANNUS CAROLINENSIS—*Baird*.

KING-BIRD, BEE MARTIN.—This is a very common summer inhabitant of New England, there being a pair or two nesting on almost every farm. The nest is placed in a fork of a limb, generally of an apple-tree. It is composed externally of coarse moss and roots, and lined with fine roots and horse hair. Eggs are laid about the last of May: are a delicate white color, spotted all over with brown and lavender. To all but bee-keepers this bird is a firm friend, but it must be acknowledged that it destroys a large number of bees whenever it has an opportunity. But other winged insects are also destroyed, and therefore this bird is beneficial to the farmer.

SAYORNIS FUSCUS—*Baird*.

PEWEE; PHŒBE BIRD.—This well-known little bird arrives from the South very early in the season, often as early as the middle of March, when we see it perched on the picket

of a fence before our window, or on a limb overhanging a stream of water, eagerly watching for the appearance of some insect: and now with a quick dart it secures its prey, and returns to its perch to break and eat it. This bird usually places its nest under a bridge, or in a shed or barn cellar. It is built of roots, grasses, and moss plastered together with mud and lined with soft grasses and wool and feathers. The eggs are four or five in number, of a beautiful pure white color.

CONTOPUS VIRENS—*Cabanis.*

WOOD PEWEE. — This bird resembles the preceding in many respects, but is not nearly so well known, as it is only found in the deep woods. It builds a most beautiful nest upon a decayed limb. It is formed almost entirely of the different lichens, together with a few grasses and fine roots. The whole is glued together with the saliva of the bird. Eggs are four in number, of a delicate cream color, spotted at greater end with blotches of dark brown.

EMPIDONAX MINIMUS—*Baird.*

LEAST FLYCATCHER.—This little bird is commonly found in the vicinity of the homestead, and often builds its nest in a tree close to the window, seeming to prefer the society of man to the solitude of the forest. It builds a beautiful little home for itself out of cotton, feathers, and bits of string, which it weaves together and fastens firmly in the crotch of some of the upper branches of the tree. The eggs are four in number, creamy-white in color. This bird, as its name implies, feeds upon flying insects.

TURDUS FUSCESCENS—*Stephens.*

WILSON'S THRUSH.—This bird makes its appearance about the first of May, and may be seen in the deep woods busily searching for its food, which, like that of all the thrushes, consists chiefly of insects. The nest is placed in a low shrub, sometimes on the ground. It is constructed of grass and leaves,

deeply hollowed, and lined with hair and fine roots. Eggs four in number, and of a bluish-green color and oval in shape.

### Turdus migratorius—*Linnæus.*

The Robin.—Every one knows the Robin, as it is a common visitor of every State, county and town in the country. Much has been said both in favor and against this bird, but we do not hesitate to call it, on the whole, beneficial. It cannot be denied that it destroys many small fruits, but as these only last a month or two, and as during the rest of the year this bird is beneficial, it seems to deserve favor. The nest and eggs are so common as to need no description. The nest is found in a variety of situations, having been found in trees, bushes, stone walls, sheds, and on the ground. Two broods are reared in a season.

### Harporhynchus rufus—*Cabanis.*

Brown Thrush.—Mr. Samuels says, "Probably none of our summer visitors are better known, and none are greater favorites, than this bird. Its beautiful song and well known beneficial habits have endeared it to the farmer, who takes it under his protection, as he should all the thrushes, and encourage its appearance in the garden and orchard." This bird is known to all as the one we see perched on the top of some tall tree pouring out a medley of song, which consists of a variety of notes of other birds and some original ones. The nest is built about the middle of May, either in a bush or on the ground. It consists of twigs, leaves and fibrous roots. Eggs three to five, dirty white, spotted thickly with brown and lilac.

### Galeoscoptes Carolinensis—*Cabanis.*

Catbird.—This is a common species, being most often seen, however, in low, swampy land, where it builds its nest on a bush or low tree. It is constructed of sticks and twigs, and lined with roots and hair. Eggs usually four in number, of a dark emerald green color; they are laid about the first

week in June. This bird takes its name from a plaintive note it utters resembling the mewing of a cat.

SIALIA SIALIS—*Haldemann.*

BLUEBIRD.—This beautiful bird is known and befriended by every farmer. It makes its appearance almost the first of the winged tribe, sometimes being seen before the snow has left the ground. Its beautiful song, heard when winter seems still with us, is welcomed by all. About the middle or last of April this bird commences building. The nest is placed in a hole in an apple tree, or a fence post, or in a box prepared by some friendly hand—anywhere, in fact, where it can find warmth and protection from the cold winds. The nest is built of feathers, soft grasses and cotton. Eggs are four or five in number, of a very light blue color. The food of this bird consists of noxious insects.

PARUS ATRICAPILLUS—*Linnæus.*

CHICKADEE.—This busy little bird is known to all as a resident with us throughout the whole year, and at all times it is engaged in ridding the trees of their insect pests. It commences building about the second week in May. The nest is placed in a hole in a dead tree, and is built of moss, a few fine grasses and hair. Eggs are from six to ten, of a pure white color, spotted at the greater end with brown.

GEOTHLYPIS TRICHAS—*Cabanis.*

MARYLAND YELLOW-THROAT.—This bird is a common summer inhabitant of all the New England States. Its nest is usually placed on the ground, and is constructed of grasses and leaves, and lined with hair. The eggs are laid about the first of June. They are usually five in number, of a creamy-white color, and covered more or less thickly with reddish-brown spots. This species is most common in swampy districts. It is beneficial as its food consists mostly of insects.

SETOPHAGA RUTICILLA—*Swainson.*

THE REDSTART.—This bird arrives from the South about

the middle of May. It is a very beneficial species, destroying insects in the trees, and also flying insects. The nest is on a low limb of some small tree, and is constructed of strips of bark, grasses and weeds, all being glued together by the saliva of the bird. It is lined with soft cottony substances. Eggs four in number, white, with spots of brown.

### Family Hirundinidæ.

The Swallows.—The swallows are all beneficial in their habits, subsisting on insects, which they are continually catching for themselves and their young. There are four species common in Essex county as follows: Cliff or Eave Swallow, Barn Swallow, White-bellied Swallow and Bank Swallow. These build their nests respectively on cliffs or caves, in barns, in boxes put up for their accommodation, and in sand-banks. The habits of this family of birds are so well-known that any description is superfluous. The Purple Martin also belongs to this family, but is not now very common in Essex county. Farmers would do well, however, to put up martin-boxes for its accommodation, and thus try to induce more of these birds to settle with us, as they are very beneficial.

### Ampelis cedrorum—*Baird.*

Cedarbird, Cherry Bird.—To those who cultivate small fruits this bird is doubtless a considerable trouble, but to farmers in general it is as beneficial as almost any other bird. Nuttall says, "They fail not to assist in ridding the trees of the deadly enemies which infest them, and the small caterpillars, beetles and various insects now [in spring] constitute their only food." The nest of this species is placed on a horizontal branch of a tree, and is built of roots, grasses, leaves and grape-vine bark. Eggs, four or five in number, are of a bluish-white color, and are marked with spots of black and brown.

### Vireosylvia olivacea—*Bonaparte.*

The Red-eyed Vireo.—This little bird is deservedly a

great favorite. Its beautiful plaintive song may be heard at any hour of the day during the summer, as it searches through the elm and other trees for caterpillars and various other noxious insects. The nest of this bird is a wonder of ingenuity and beauty. It is constructed of pieces of wasp's nests, bits of paper, spiders' webs, and thin pieces of bark. These are woven together, and glued by the bird's saliva, in the form of a basket, and sewed firmly to the fork of some small branch of a tree. Eggs are four in number, pure white, with spots at larger end of brown and black.

SPIZELLA SOCIALIS—*Bonaparte.*

CHIPPING SPARROW.—This is a very common and well-known bird, since it seems to take delight in associating with man, and is to be found nesting near his habitations. The nest includes a few fine grasses, but the chief substance used is horsehair. The eggs are four or five in number, bluish-green in color, and marked with spots of black and brown, thickest at the greater end. This bird is beneficial, subsisting largely on insects.

MELOSPIZA MELODIA—*Baird.*

SONG SPARROW.—This bird takes its name from its beautiful song, which is heard from early spring to the middle of October. Its habits are beneficial. The nest is placed sometimes on the ground, and sometimes on bushes or small trees, and is built of grasses and weeds. Eggs are four or five in number, and are of a dirty-white color, spotted with different shades of brown, thickest at greater end. Two broods are reared in a season.

PIPILO ERYTHROPHTHALMUS—*Vieillot.*

GROUND ROBIN, CHEWINK.—This bird has a peculiar note resembling the syllables "che-wink," hence its name. It is a very common species in Essex county, and may be observed in the deep woods and by the roadside running nimbly along, or scratching among the leaves and dirt for its insect food.

About the second week in May this bird commences building. The nest is placed on the ground, often beneath a tussock of grass. It is constructed of leaves and grasses, and is lined with fine grasses and roots. Eggs are four in number, of a dark reddish-white color, covered all over with fine spots of brown.

DOLICHONYX ORYZIVORUS—*Swainson*.

BOBOLINK, REEDBIRD.—In the Southern States this bird is regarded with much dislike because it destroys a great deal of rice, but to New England farmers it is very beneficial, for while with us it subsists largely upon insects. Everybody has been delighted with the beautiful song of this bird. The nest is placed beneath a tussock of grass in some swampy tract of land, and is so well concealed as to be next to impossible to discover it. It is built of grasses and weeds. The eggs are four or five in number, and vary from light blue to grayish-white in color, with blotches and spots of black and brown.

MOLOTHRUS PECORIS—*Swainson*.

COW BLACKBIRD.—The habits of this bird are very peculiar. It makes its appearance about the middle of March, and, in flocks of perhaps ten or dozen, frequents the fields where cattle are pastured, and feeds upon the flies and other insects which are to be found most plentifully about the cattle. When the female wishes to lay, instead of building a nest for herself, she visits the nest of some other bird, usually one smaller than herself, and, watching for an opportunity when the owner is away, she deposits her egg. This is generally hatched by the bird who has thus been imposed upon; and the young Cow Blackbird, being larger and stronger than the other young birds, often crowds them out of the nest and monopolizes all the nourishment and protection of the stepmother. The eggs of this species are grayish-white, with fine spots of brown over the whole surface.

AGELEUS PHŒNICEUS—*Vieillot*.

SWAMP BLACKBIRD, (RED WINGED BLACKBIRD.)—This

bird arrives from the South about the middle or last of March, and immediately establishes itself in the meadows and swamps. About the first of May the preparations for building commence. The nest is placed in a low bush and is built of course grasses woven together and deeply hollowed. The eggs, which are four or five in number, are of a light, blue color, and are marked with streaks and blotches of brown and black. This bird is rather injurious in its habits, as it eats a good deal of corn and other grain.

ICTERUS BALTIMORE—*Audubon*.

BALTIMORE ORIOLE, (GOLDEN ROBIN.)—This is, perhaps, the most beautiful bird in plumage and song we have. With the colors of gold and orange-red contrasted with the black on the wings, and with a voice of the purest harmony, it is deservedly a great favorite. The nest of this bird is a very curious affair. It is commenced by winding and weaving together a lot of string, thread ravellings, or anything else of the sort, and binding the whole finally to the drooping branch of an elm or willow tree. Thus a sort of pouch is formed five or six inches deep, in which the nest proper is placed. This consists principally of hair and a few fine grasses. The eggs are four or five in number and are of a bluish-white color, marked with irregular spots and blotches of dark brown and black.

CORVUS AMERICANUS—*Audubon*.

THE COMMON CROW.—No bird has ever excited so much controversy and comment as the Crow. At one time all the agricultural papers were continually saying something for or against this bird, and the question whether it is beneficial or injurious has not yet been settled to the satisfaction of all. In our opinion the Crow is very injurious, and we will give a few reasons for this opinion. It is well known to all farmers that the Crow does actually pull up and eat a good deal of corn. But those who defend this bird say that the insects he destroys compensate for this loss. Now, if we

grant this, the bird will be neutral, doing just as much good as he does harm. But this leaves unnoticed the fact, which is undoubted by all careful observers of birds, that the Crow destroys a great number of small birds which, if permitted to live, would destroy more insects in a day than a Crow would in a year. Therefore, we conclude his habits are far from beneficial. The nest is placed generally in a pine tree, near the top, and is constructed of course sticks and lined with leaves. The eggs are four in number, of a light-green color, covered with spots and blotches of brown. The eggs are generally laid by the first week in May.

CYANURUS CRISTATUS—*Swainson*.

BLUE JAY.—This bird is also of injurious habits, as it destroys but comparatively few insects, while during May and June it subsists on the eggs and young of other birds. The nest is placed on a low limb of a pine or other tree, and is built of sticks and twigs, with hardly any lining. The eggs are four or five in number, of a light-green color, spotted finely with different shades of brown.

DR. E. H. PAYSON, TREASURER, IN ACCT. WITH ESSEX AG. SOCIETY, CR.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1870. | | | 1870 | | | | |
| October. | To balance of former acc't, | $1215 68 | October. | By Premiums and Gratuities awarded | | | |
| | To Bank dividends, | 437 50 | 1871. | by Trustees, | | $1068 50 | |
| Decem'r. | To State Bounty, | 600 00 | October. | By expenses as follows: | | | |
| 1871. | To Receipts of Exhibition at Ipswich, | 1236 08 | | Expenses of Exhibition at Ipswich, | 1241 16 | | |
| January. | To New Members, | 207 00 | | Other expenses of Exhibition, | 102 81 | | |
| | To dividend First National Bank, Salem, | 84 00 | | Printing, | 495 24 | | |
| | To U. S. coupon, | 18 00 | | Secretary, | 100 00 | | |
| | To Essex Railroad coupons, | 20 47 | | Postage, freight, &c., | 54 80 | | |
| March. | To coupon 10-40 Bond, | 27 68 | | Rent of Room, | 25 00 | | |
| July. | To dividend First National Bank, Salem, | 84 00 | | Engraving Plan, | 15 00 | — 2034 01 | |
| | To Essex Railroad coupons, | 20 47 | | By investment in Bank Stock, | | 585 87 | |
| | To coupon 5 20 Bond, | 16 95 | | By balance to new account, | | 1260 95 | |
| | To April dividends from Bank Stock, | 446 50 | | | | | |
| Sept. | To coupon 10-40 Bond, | 28 25 | | | | | |
| | To unclaimed Premiums, | 266 75 | | | | | |
| | To Rent of Farm, | 250 00 | | | | | |
| | | $4949 33 | | | | $4949 33 | |

# FUNDS BELONGING TO THE SOCIETY.

| | |
|---|---|
| 16 shares Warren National Bank, cost, | $1595 40 |
| 15 shares South Danvers National Bank, | 1471 25 |
| 5 shares First National Bank, Danvers, par. | 375 00 |
| 5 shares National Revere Bank, Boston, cost, | 585 87 |
| 8 shares National Exchange Bank, Salem, par, | 800 00 |
| 14 shares First National Bank, Salem, cost, | 1402 66 |
| 12 shares Mercantile National Bank, Salem, cost, | 1226 50 |
| 23 shares Merchants' National Bank, Salem, cost, | 1189 50 |
| 42 shares Asiatic National Bank, Salem, cost, | 1281 25 |
| 2 shares Salem National Bank, Salem, par, | 200 00 |
| Bonds Essex Railroad, par, | 700 00 |
| Bonds of United States, | 1609 00 |
| | $12 436 43 |

| | |
|---|---|
| Amount bro't up, | $12,436 43 |
| Cash on hand as above, | 1,260 95 |
| | 13,697 38 |
| Funds on hand 1870, | 13,066 24 |
| Gain in 1870-71, | $631 14 |

The whole charge against the Treadwell Farm to date is $684 28

The Whole charge against the Colman Library to date is $719 22

E. E. EDWARD H. PAYSON, Treasurer.

SALEM, October, 1871.

The undersigned has examined the foregoing account of receipts and disbursements of the Treasurer, and also his statement of the funds belonging to the Society (showing a balance in his hands of $1260 95) and find the same correctly cast and well vouched.

GEO. D. PHIPPEN, Auditor.

SALEM, Dec. 9, 1871.

# OFFICERS OF THE SOCIETY.

## FOR 1871—72.

PRESIDENT.

WILLIAM SUTTON, of Peabody.

VICE PRESIDENTS.

GEORGE B. LORING, of Salem.
JOHN KEELEY, of Haverhill.
JOSHUA L. NEWHALL, of Newburyport.
BENJAMIN P. WARE, of Marblehead.

TREASURER.

EDWARD H. PAYSON, of Salem.

SECRETARY.

CHARLES P. PRESTON, of Danvers.

HONORARY TRUSTEES.

JOHN W. PROCTOR, of Peabody.
ALLEN W. DODGE, of Hamilton.
JOSEPH HOW, of Methuen.

TRUSTEES.

Charles P. Blunt, Andover;
Dudley Bradstreet, Topsfield;
Eben G. Berry, Danvers;
W. H. B. Currier, Salisbury;
Francis Dane, Hamilton;
Aaron Dodge, Beverly;
Levi Emery, Lawrence;
Alonzo B. Fellows, Ipswich;
J. D.W. French, N. Andover;
James Flint, Middleton;
J. J. H. Gregory, Marblehead;
Joseph S. Howe, Methuen;
Joseph Hale, Rowley;
Israel Herrick, Boxford;
John Knight, Jr., Manchester;
James P. King, Peabody;
David W. Low, Gloucester;
Edward K. Lee, Essex;
Joseph Longfellow, Newbury;
William B. Morgan, Wenham;
James R. Nichols, Haverhill;
Josiah Newhall, Lynnfield;
Sherman Nelson, Georgetown;
Warren Ordway, Bradford;
Sam'l C. Pitman, Swampscott;
Daniel H. Stickney, Groveland;
John L. Shorey, Lynn;
Aaron Sawyer, Amesbury;
T. C. Thurlow, W. Newbury;
P. T. Winkley, Newburyport.

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NEW MEMBERS—1871.

Elias Andrews, Essex;
John B. Abbott, Andover;
Hartwell B. Abbott, Andover;
D. Brainerd Burnham, Essex;
Chas. P. Barrett, Gloucester;
Oliver S. Butler, Georgetown;
M. F. Batchelder, Peabody;
Dan'l T. Babson, Gloucester;
Erastus Clark, Ipswich;
George G. Davis, N. Andover;
Charles Dole, Rowley;
William A. Dane, Hamilton;
John Grant, Ipswich;
Joshua B. Grant, Ipswich;
David L. Haskell, Essex;
A. Haseltine, Jr., Haverhill;
John A. Hoyt, Georgetown;
Augustine Hodgkins, Ipswich;
George Hodgdon, Ipswich;
F. St. Clair Herrick, Lawrence;
Mrs. Robt. Jordan, Ipswich;
Nathan'l E. Ladd, Groveland;
E. C. Little, Newbury;
J. H. Lovering, Georgetown;
Charles Mitchell, Beverly;
Mrs. L. Mallard, Lawrence;
D. Oscar Nelson, Rowley;
P. Ordway, Newburyport;
David T. Perley, Ipswich;
Edward H. Potter, Rowley;

John Perkins, Essex :
Samuel T. Poor, Georgetown :
George H. Penney, Saugus :
W. W. Perkins, Newbury :
E. R. Perkins, Salem :
Mrs. Oliver Patch, Hamilton :
George W. Rogers, Salem :
Eli C. Rankin, Beverly :
Moses A Shackley, Peabody :
George J. Smith, Rowley ;
Geo. W. Symonds, Lynnfield ;
Nathaniel Shatswell, Ipswich ;
B. F. Stanley, Newburyport ;
J. C. Stanley, Newburyport ;
M. O'Shea, Salem :
Albert Titcomb, Rowley ;
J. C. Underhill, Peabody ;
Robert H. Waters, Wenham ;
George D. Walton, Peabody :
Joseph Wilson, Beverly.

☞Any citizen in the County may become a member by paying the sum of three dollars to increase the permanent funds of the Society, and he will receive a certificate of his membership from the Secretary. No fines or assessments are ever imposed. Members are entitled to the free use of the Library, and a copy of the Transactions each year. All ordained Ministers of the Gospel residing in the County, and editors of newspapers, published therein, are entitled to the privileges of the Library.

# LIBRARY.

The LIBRARY is established at the Plummer Hall, Essex street, Salem, where Members can obtain books under the following

REGULATIONS:

1. Each member shall be entitled to take from the Library TWO VOLUMES, on signing a receipt for the same, and agreeing to be accountable therefor.

2. No member shall keep any book more than two weeks, after being notified (by the Librarian) that the same is wanted by another member.

3. All books belonging to the Library shall be returned on or before the 15th of November in each year; that the same may be examined and the condition of the Library reported to the Trustees.

4. Any member who shall neglect or refuse to conform to these Regulations shall thereby forfeit the privilege of taking books from the Library.

# List of Premiums, &c.

FAT CATTLE.

| | |
|---|---|
| Paul T. Winkley, Newburyport, 1st premium, diploma and | $10 00 |
| Paul T. Winkley, Newburyport, 2d premium, | 8 00 |
| Samuel A. Merrill, Danvers, 3d premium, | 5 00 |

BULLS.

| | |
|---|---|
| Francis Dane, Hamilton, Jerseys, 1st premium, diploma and | 10 00 |
| Charles Mitchell, Beverly, Jerseys, 2d premium, | 5 00 |
| Jos. C. Gordon, West Newbury, Ayrshires, 1st premium, diploma and | 10 00 |
| G. W. Herrick, Gloucester, Ayrshire, 2d premium, | 5 00 |
| Jos. Kittredge, North Andover, Durhams, 1st premium, diploma and | 10 00 |

MILCH COWS.

| | |
|---|---|
| Henry G. Kimball, Bradford, 1st premium, diploma and | 15 00 |
| Francis H. Appleton, Peabody, 2d premium, | 10 00 |
| Francis Dane, Hamilton, Jerseys, 1st premium, diploma and | 10 00 |
| D. F. Appleton, Ipswich, Jerseys, 2d premium, | 5 00 |
| Francis H. Appleton, Peabody, Ayrshires, 1st premium, diploma and | 10 00 |
| John C. Dennis, Marblehead, Ayrshires, 2d premium, | 5 00 |

HERD OF MILCH COWS.

| | |
|---|---|
| Francis Dane, Hamilton, 1st premium, diploma and | 15 00 |

HEIFERS.

| | |
|---|---|
| George M. Brown, Bradford, 3 years old, 1st premium, diploma and | 10 00 |
| Francis Dane, Hamilton, 3 years old, 2d premium, | 8 00 |
| Francis H. Appleton, Peabody, 3 years old, 3d premium, | 5 00 |

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|---|---|
| Francis Dane, Hamilton, Jerseys, 3 years old, 1st premium, | 10 00 |
| Francis H. Appleton, Peabody, Ayrshires, 3 years old, 1st premium. | 10 00 |
| H. G. Herrick, Lawrence, 2 years old, 1st premium, | 8 00 |
| Charles J. Peabody, Topsfield, 2 years old, 2d premium. | 5 00 |
| Francis Dane, Hamilton, 2 years old, 3d premium, | 3 00 |
| R. G. Waters, Wenham, yearlings, 1st premium, | 5 00 |
| Francis Dane, Hamilton, yearlings, 2d premium, | 3 00 |

WORKING OXEN AND STEERS.

| | |
|---|---|
| George Hodgdon, Ipswich, working oxen, 1st premium, diploma and | 12 00 |
| R. S. Bray, Newbury, working oxen, 2d premium, | 10 00 |
| William Foster, North Andover, working oxen, 3d premium, | 8 00 |
| R. S. Bray, Newbury, steers, 1st premium, diploma and | 8 00 |
| Charles J. Peabody, Topsfield, steers, 2d premium, | 5 00 |
| R. S. Bray, Newbury, best teamster, premium, | 10 00 |

STEERS.

| | |
|---|---|
| Romulus Jaques, West Newbury, 3 years old, 1st premium, | 6 00 |
| Jos. Kittredge, North Andover, 3 years old, 2d premium, | 5 00 |
| Moses Colman, Newbury, 2 years old, 2d premium, | 4 00 |
| Hiram Young, Newbury, yearlings, 1st premium, | 4 00 |

STALLIONS.

| | |
|---|---|
| Francis Dane, Hamilton, 4 years old, 1st prem., diploma and | 15 00 |
| F. Battelle, Newburyport, 4 years old, 2d premium, | 15 00 |
| Francis Dane, Hamilton, 3 years old, 1st premium, | 8 00 |

BROOD MARES.

| | |
|---|---|
| M. O'Shea, Salem, 1st premium, diploma and | 15 00 |
| S. C. Oliver, Salem, 2d premium, | 10 00 |

FAMILY HORSES.

| | |
|---|---|
| Geo. W. Rogers, Salem, 1st premium, diploma and | 15 00 |
| O. S. Butler, Georgetown, 2d premium, | 10 00 |
| Edward H. Little, Newbury, 3d premium, | 8 00 |

FARM AND DRAFT HORSES.

| | |
|---|---|
| Peter Holt, North Andover, 1st premium, diploma and | 12 00 |
| J. F. Dane, Hamilton, 2d premium, | 10 00 |

| | |
|---|---|
| W. C. Langley, Newbury, 3d premium, | 8 00 |
| S. A. Merrill, Danvers, 4th premium, | 5 00 |
| Sylvester Dane, Hamilton, the best teamster, special premium, offered by Dr. Loring, | 10 00 |

COLTS.

| | |
|---|---|
| Geo. W. Rogers, Salem, 4 years old, 1st prem., diploma and | 10 00 |
| Theodore Holman, Salem, four years old, 2d preminm, | 6 00 |
| John Swinerton, Danvers, 4 years old, 3d premium. | 4 00 |
| Geo. B. Martin, Danvers, 3 years old, 1st premium, | 8 00 |
| Geo. B. Martin, Danvers, 3 years old, 2d premium, | 4 00 |
| Jacob Rhoades, Lynn, 2 years old, 1st premium, | 6 00 |
| Geo. B. Martin, Danvers, 2 years old, 2d premium, | 2 00 |
| S. B. Gregory, Hamilton, 2 years old, premium, | 1 00 |
| Asahel H. Patch, Hamilton, yearling, 1st premium, | 6 00 |
| F. Dane, Hamilton, yearling, 2d premium, | 2 00 |

SWINE.

| | |
|---|---|
| Penny & Ash, Saugus, Boar, 1st premium. diploma aand | 8 00 |
| Henry Saltonstall, Peabody, Sow, 1st prem., diploma and | 8 00 |
| Jos. F. Dane, Hamilton, Sow, 2d premium, | 5 80 |
| Henry Saltonstall, Peabody, weaned pigs, 1st premium, | 5 00 |
| Wm. Foster, North Andover, weaned pigs, 2d premium, | 3 00 |

SHEEP.

| | |
|---|---|
| D. F. Appleton, Ipswich, flock, 1st premium, diploma and | 8 00 |
| Francis Dane, Hamilton, flock, 2d premium, | 5 00 |
| B. D. Appleton, Ipswich, Buck, 1st premium, diploma and | 6 00 |
| D. F. Appleton, Ipswich, Lambs, 1st premium, | 3 00 |

POULTRY.

| | |
|---|---|
| H. C. Fegan, Groveland, Light Brahmas, 1st premium, | 3 00 |
| J. S. Ives, Salem, Light Brahmas, 2d premium. | 1 00 |
| E. R. Perkins, Salem, Dark Brahmas, 1st premium, | 3 00 |
| Mrs. G. L. Streeter, Salem, Dark Brahmas, 2d premium, | 1 00 |
| H. C. Fegan, Groveland, Buff Cochins, 1st premium, | 3 00 |
| E. R. Perkins, Salem, Buff Cochins, 2d premium, | 1 00 |
| E. R. Perkins, Salem, Partridge Cochins, 1st premium. | 3 00 |
| Mrs. G. L. Streeter, Salem, Partridge Cochins, 2d premium, | 1 00 |
| E. R. Perkins, Salem, Black Cochins, 1st premium, | 3 00 |

| | |
|---|---|
| Mrs. G. L. Streeter, Salem, Black Cochins, 2d premium, | 1 00 |
| E. R. Perkins, Salem, Dominique, 1st premium, | 2 00 |
| Geo. W. Knight, Newburyport, Dominique, 2d premium, | 1 00 |
| D. B. Wallace, Peabody, Black Spanish, 1st premium, | 2 00 |
| E. R. Perkins, Salem, Leghorns, 1st premium, | 2 00 |
| A. H. Plouff, Ipswich, Hamburgs, 1st premium, | 2 00 |
| E. R. Perkins, Salem, Polish, 1st premium, | 2 00 |
| C. H. Richardson, Salem, Guineas, 1st premium, | 2 00 |
| J. S. Ives, Salem, Bantams, 1st premium, | 2 00 |
| E. E. Bartlett, Newburyport, Ducks, 1st premium, | 2 00 |
| Joseph Horton, Ipswich, Geese, 1st premium, | 2 00 |
| H. C. Fegan, Groveland, Black Cochins, gratuity, | 1 00 |
| O. F. Putnam, Danvers, Wild Geese, gratuity. | 2 00 |
| L. M. Locke, Salem, coop Pigeons, gratuity, | 50 |
| D. B. Wallace, Peabody, Chickens, gratuity, | 1 00 |
| E. R. Perkins, Salem, Ducks, gratuity, | 1 00 |
| E. R. Perkins, Salem, Houdans, gratuity, | 1 00 |
| E. R. Perkins, Salem, White Cochins, gratuity, | 1 00 |

PLOUGHING—DOUBLE TEAMS.

| | |
|---|---|
| R. T. Jaques and R. M. Bray, Newbury, 1st premium, diploma and | 12 00 |
| J. and D. L. Goodrich, West Newbury, 2d premium, | 10 00 |
| Joseph Horton, Ipswich, 3d premium, | 9 00 |

PLOUGHING—SINGLE TEAMS.

| | |
|---|---|
| R. T. Jaques, Newbury, 1st premium, diploma and | 10 00 |
| George Hodgdon, Ipswich, 2d premium, | 7 00 |

PLOUGHING WITH HORSES.

| | |
|---|---|
| Eustace Balch, Groveland, 1st premium, diploma and | 10 00 |
| Edwin C. Little, Newbury, 2d premium, | 7 00 |
| Edward H. Little, Newbury, 3d premium, | 4 00 |

PLOUGHING—SWIVEL PLOUGH.

| | |
|---|---|
| William Foster, North Andover, 2d premium, | 10 00 |
| Eli C. Rankin, Beverly, 4th premium, | 5 00 |

PLOUGHING BY BOYS.

| | |
|---|---|
| Willie Horton, Ipswich, 1st premium, | 25 00 |

AGRICULTURAL IMPLEMENTS.

| | |
|---|---|
| Aaron Dodge, Beverly, Pulverizing Harrow, | 3 00 |
| Whittemore, Belcher & Co., of Boston, Blanchard Churn, | 2 00 |
| Whittemore, Belcher & Co., of Boston, Williamson Whiffletree, | 2 00 |
| Whittemore, Belcher & Co., of Boston, Buchan's Carbolic Soaps, | 2 00 |
| Webster Smith, Ipswich, Ox Wagon, | 3 00 |
| C. R. Sargent, Newburyport, Seed Sower, | 2 00 |
| E. E. Lummus, Boston, Cultivator, | 2 00 |
| E. E. Lummus, Boston, Ox Yoke, | 3 00 |
| E. E. Lummus, Boston, Straw Cutter, | 3 00 |
| Francis Dane, Hamilton, Farm Wagon, 1st premium, | 5 00 |
| Henry Hobbs, Wenham, Cart Harness, 1st premium, | 5 00 |

CARRIAGES.

| | |
|---|---|
| Osgood & Brothers, Georgetown, Phaeton, diploma and | 5 00 |
| C. W. Chapman, Ipswich, Wagon, | 3 00 |
| Pike & Whipple, Peabody, Milk Wagon, | 3 00 |
| Bradley & Clark, Wenham, Concord Wagon, | 2 00 |
| Dean & White, Georgetown, Wagon, | 2 00 |
| William Noyes, Newburyport, Wagon, | 2 00 |

DAIRY.

| | |
|---|---|
| Francis Dane, Hamilton, Butter, 1st premium, diploma and | 10 00 |
| Oliver Patch, Hamilton, Butter, 2d premium, | 8 00 |
| Clarisa S. Caldwell, Ipswich, Butter, 3d premium, | 6 00 |
| J. C. Underhill, Peabody, Butter, 4th premium, | 4 00 |
| Lucy Marshall, Ipswich, Cheese, 2d premium, | 5 00 |

FARMS.

| | |
|---|---|
| D. F. Appleton, Ipswich, premium, diploma and | 30 00 |
| James R. Nichols, Haverhill, diploma. | |

GRAIN CROPS.

| | |
|---|---|
| J. C. & R. Jaques, West Newbury, Corn Crop, 1st premium, diploma and | 10 00 |
| J. C. & R. Jaques, West Newbury, Rye Crop, 1st premium, diploma and | 10 00 |

ROOT CROPS.

| | |
|---|---|
| Thomas Saunders, Hamilton, Ruta Bagas, 1st premium, diploma and | 10 00 |
| Joseph N. Rolfe, Newbury, Onion Crop, 1st premium, diploma and | 10 00 |
| A. P. Noyes, Middleton, Onion Crop, gratuity, | 10 00 |
| Paul T. Winkley, Newburyport, Potatoe Crop, 1st premium, diploma and | 10 00 |

SMALL FRUITS.

| | |
|---|---|
| B. F. Huntington, Amesbury, Strawberry Crop, 1st premium, | 10 00 |

ESSAYS.

| | |
|---|---|
| Francis H. Appleton, West Peabody, 1st prem., diploma and | 15 00 |
| Charles J. Peabody, Topsfield, 2d premium, | 10 00 |
| Frank H. Palmer, Boxford, 3d premium, | 8 00 |

REPORTS OF COMMITTEES.

| | |
|---|---|
| Ben. Perley Poore, West Newbury, 1st prem., diploma and | 10 00 |
| A. H. Patch, Hamilton, 2d premium, | 8 00 |
| Joseph How, Methuen, 3d premium, | 6 00 |

| | |
|---|---|
| Awarded by Committee on Vegetables and Herbs, | $66 00 |
| " " " " Fruit, | 167 50 |
| " " " " Flowers, | 33 00 |
| " " " " Counterpanes, Rugs, etc., | 36 00 |
| " " " " Fancy Articles, | 28 00 |
| " " " " General Merchandise, | 8 00 |
| " " " " Bread and Honey, | 19 00 |
| " " " " Articles manufactured from Leather, | 14 00 |
| | $1,278 00 |

# RECAPITULATION.

## FARMS.

| | | | |
|---|---|---|---|
| Amount awarded to | Farms, | $30 00 | |
| " " | Ploughing, | 109 00 | |
| " " | Farm Implements and Carriages, | 49 00 | |
| | | | $188 00 |

## FARM STOCK.

| | | | |
|---|---|---|---|
| Amount awarded to | Fat Cattle, | 23 00 | |
| " " | Bulls, | 40 00 | |
| " " | Milch Cows, | 70 00 | |
| " " | Heifers, | 67 00 | |
| " " | Working Oxen and Steers, | 53 00 | |
| " " | Steers, | 19 00 | |
| " " | Stallions, | 38 00 | |
| " " | Breeding Mares, | 25 00 | |
| " " | Family Horses, | 33 00 | |
| " " | Farm and Draft Horses, | 45 00 | |
| " " | Colts, | 49 00 | |
| " " | Swine, | 29 00 | |
| " " | Sheep, | 22 00 | |
| " " | Poultry, | 46 00 | |
| | | | 559 00 |

## FARM PRODUCE.

| | | | |
|---|---|---|---|
| Amount awarded to | Vegetables, | 66 00 | |
| " " | Fruits, | 167 00 | |
| " " | Flowers, | 33 00 | |
| " " | Dairy, | 33 00 | |
| " " | Bread, etc., | 19 00 | |
| " " | Grain Crops, | 20 00 | |
| " " | Root Crops, | 40 00 | |
| " " | Small Fruits, | 10 00 | |
| " " | All other objects, | 143 00 | |
| | | | 531 00 |
| | Total, | | $1,278 00 |

# LIST OF MEMBERS

—OF THE—

# Essex Agricultural Society.

Note.—Those marked with * deceased since 1869; with † removed from the county. For names of members deceased previous to 1869, refer to list published that year.

## AMESBURY.

*Bailey, Thomas
Binney, William C.
Cole, Augustus K.
Evans, John
Goodwin, A. E.
Gunnison, William
Haskell, William H.
Jones, Philip
†Moore, Appleton
Morse, John S.
Nichols, Charles H.
*Nichols, Stephen, Jr.
Patten, T. B.
Quimby, Thomas W.
Sargent, J. B.
Sargent, Orlando
Sargent, Patten
Sargent, Willis
Sawyer, Aaron
Sawyer, Thomas C.
Tukesbury, D. M.

## ANDOVER.

Abbott Asa A.
Abbott, George A.
Abbott, Hartwell, B.
Abbott, John B.
*Abbott, Jonathan
Abbott, Moody B.
Abbott, Stephen D.
Abbott, Sylvester
*Ballard, Joshua
Blunt, Charles C.
Blunt, Milton J.
Bardwell, Simeon
†Bodwell, Henry A.
†Bond, William
Callahan, Robert
Carruth, Isaac
Chickering, William
†Chamberlain, N., Jr.
Chandler, Joseph
†Chipman, Degrass
Cheever, James
*Clark, Hobart
Cummings, C. O.
†Farnham, John C.
†Flagg, Wilson
Flint, John
Foster, Thomas C.
Foster, George
Foster, Moses, Jr.
†French, Charles
†French, George H.
*Gray, David
Harnden Henry C.
Hazen, Nathan W.
Hidden, David I. C.
Holt, Dean
Holt, E. F.
†Holt, Herman
Holt, H. P.
Jenkins, John B.
Jenkins, Kendall
Kimball, Walter H.
Mason, George F.
*Merrill, William
Morton, Marcus, Jr.
*Needham, Samuel
†Pierce, William
*Pettingill, Merrill
Phelps, Hermon
Pillsbury, Paul P.
Rogers, Fitzwilliam
Raymond, Samuel
Rea, Jasper
Smith, Peter
Upton, Edward C.
Whittier, Nathaniel

## BEVERLY.

Appleton, Isaac
Baker, John I.
Baker, Stephens
Chase, Samuel
Cole, Zachariah
Cressy, Joseph
Conelly, Stephen
Dodge, Aaron
Dodge, Richard
Dodge, William E.
Edwards, Ephraim A.
Edwards, Israel O.
Friend, Seth
Foster, Henry W.
Giles, Benj. V.
Haven, Franklin
Herrick, Joseph H.
Larcom, David
Lummus, E. E.
Lord, Abraham
Lord, Cyrus W.
Lovett, Francis
*Marshall, Timothy
Mason, Lyman
Mason, Alphonso
Meacom, John
Mitchell, Charles
Paine, Charles C.
Porter, Adoniram
*Porter, John
†Porter, Robert
Rankin, Eli C.
†Safford, Nathaniel T.
Stephens, Augustus
*Sheldon, Jesse
Standley, Sam'l D. G.
†Stone, Edwin M.
Walker, Lawson
Waters, Richard P.
†Waters, William C.
Wilson, Joseph

## BOXFORD.

Andrew, Isaac W.
Barnes, B. S.
Cleveland, Wm. N.
Cole, John K.
Curtis, Francis
Chadwick, Geo. W.
Day, John
Day, Joshua T.
†Gould, Jacob
Hale, Isaac
Hale, John
Harriman, Daniel F.
Herrick, Israel
Killam, Oliver P.
Kimball, Samuel
Palmer, Charles Lane
Perley, Charles
Sawyer, Thomas
Wood, Enoch
Wood, John T.

## BRADFORD.

Carlton, James T.
Carlton, Nathaniel
Chadwick, Henry M.
Cogswell, George
Cogswell, William
Day, Albert J.
Day, Hiram
Day, Lafayette
Day, Royal
Elliott, William
Ellis, John A.
Emerson, Charles B.
Gage, Edmund.
Hopkinson, Samuel W.
Haseltine, Thomas
Haseltine, William
Johnson, A. P.
Johnson, Charles G.
Johnson, Laburton
Kimball, Albert
Kimball, A. Laburton
Kimball, Charles
Kimball, David
Kimball, Henry G.
Kimball, Leverett
Kimball, Seth
*Kimball, Silvester.
Kimball, William B.
Kimball, Wm. Eustace
Little, Mrs. M. P.
*Locke, Oliver
Merrill, John F.
Morse, C. E.
†Nichols, Albert
Ordway, Alfred
Ordway, Enoch F.
†Ordway, Geo. W.
Ordway, Warren
Peabody, Frank
Peabody, Daniel
Perley, John
†Porter, William F.
Sawyer, Samuel C.
Tewksbury, John B.
†Titcomb, Charles W.

## DANVERS.

†Adams, Marshall C.
Bartlett, James A.
Berry, Allen A.
Berry, Eben G.
Black, William
Boardman, I. P.
Brown, Amos
Brown, Charles W.
Butler, J. C.
Cummings, Samuel P.
†Devereux, George F.
Demsey, L. P.
Dodge, Elnathan
Dodge, Francis
Dodge, William, Jr.
Fellows, Alfred
Fowler, Samuel P.
Fowler, Augustus
French, George W.
Gould, Charles H.
Grosvenor, David A.
†Holden, Seth
Hyde, Elisha G.
Knight, S. Leverett
Lander, William A.
Lane, Benjamin T.
Langley, J. R.
Legro, Edmund
Learoyd, A. P.
Martin, George B.
Massey, S. D.
Merrill, Samuel A.
Merrill, Levi
*Merrill, Ernest S.
Moody, H. L.
Mudge, Edwin
Nichols, Andrew
Page, Nathan, Jr.
Peart, William B.
Perley, A. P.
Perley, Frederick
Perry, James M.
Pettingill, David A.
Pope, Ira P.
Porter, Benjamin F.
Pratt, Amos
Preston, Charles P.
Preston, John
Preston, Samuel
Preston, John S.
Prince, Amos
Putnam, Charles O.
Putnam, Orrin
Putnam, Otis F.
Putnam, F. W.
Putnam, Eben
Putnam, Edwin F.
Putnam, Francis P.
Putnam, Israel H.
Putnam, J. A.
Putnam, Joel
Putnam, Rufus
Putnam, Wm. R.
Richards, Daniel
Sears, John A.
Silvester, Joshua
Spaulding, Samuel W.
Swan, Sylvanus B.
Swinerton, John
Tapley, George
Tapley, Gilbert
Tapley, Gilbert A.
*Tapley, Nathan
Waite, Peter
Wallis, Samuel
Walcott, William H.
Warren, Aaron W.
Warren, Jonas
Weston, Wm. L.
White, Amos A.
*Wilkins, Joel

## ESSEX.

Andrews, Elias
Andrews, Elihu
Andrews, Joseph
Andrews, Miles S.
Burnham, D. Brainerd
Burnham, Washington
Choate, David
Cogswell, Chas. B.
Dodge, Grover
Haskell, David L.
Haskell, George
Knowlton, Aaron
Lee, Edward K.
Low, Aaron
Low, Josiah
Mears, Wm. H.
Perkins, John
Story, Ephraim.

## GEORGETOWN.

*Adams George E.
Bateman, A. P.
Boynton, George W.
†Brocklebank, Samuel
Butler, Oliver S.
Chapman, Jonathan
Dole, Moody S.
Dole, Richmond
Hoyt, John A.
Jewett, Jacob F.
*Jewett, Robert
Lambert, Nathaniel
Little, Samuel
Lovering, John H.
Moulton, Daniel E.
Nelson, Charles
Nelson, Solomon
Nelson, Sherman

Nelson, William
Osgood, Stephen
Pettingell, Henry
Pillsbury, J.
Poor, Samuel T.
Preston, John
Sanborn, George W.
Spofford, Sumner P.
Tenney, George J.
Tenney, Richard
Tenney, Moses
Tenney, Milton G.
Tenney, Orlando B.
Tenney, Gorham D.
Wheeler, William S.
Wilson, Isaac
Wildes, Green

## GLOUCESTER.

Babson, John J
Babson, Gustavus Jr.
Babson, Daniel T.
Barrett, Charles P.
Boynton, Charles
Butler, Benjamin F.
Clark, John
Davis, William P.
Dale, Eben, Jr.
Dennin, George
Garland, Joseph
Griffin, Bennett
Hadley, William
Harvey, Alonzo F.
Herrick, Gardner W.
James, George
Jones, William
Lane, Andrew
Low, David W.
Lowe, Sidney
Parsons, William 2d
Patch, Isaac
Pearce, Edward H.
Ricker, Richard W.
Rogers, John S.
Rust, William P.
Stanwood, Barnard
*Stevens, Zachariah
Wonson, George M.

## GROVELAND.

Atwood, Moses P.
Atwood Daniel
Balch, Eustis
Balch, Thomas H.
Burbank, John
Clark, Elijah
Curtis, Edwin T.
Fegan, Henry C.
Hale, E. G. M.
Hardy, Ira
Harrington, Edward
Hopkinson, Walter. H.
Ladd, John I.
Ladd, Nath'l E.
Ordway, Leverett S.
Parker, Benjamin
Parker, Eldred S.
Pemberton, Luther K.
Savary, Charles G.
Savary, Charles P.
Spofford, Jeremiah
Stickney, Daniel H.
Stickney, Abel
†Stickney, Niles T.
Stickney, Charles
Wardwell, Z. C.
Wales, Herbert E.
Woodman, Ira S.
Walker, George S.

## HAVERHILL.

*Bartlett, James A.
Barry, J. M.
Bodwell, Stephen
Brickett, Barnard
Brickett, Daniel
Brickett, Daniel H.
Brickett, Franklin
Butters, Charles
Caldwell, William
Carlton, John
Carlton, Samuel
Carlton William B.
Chase, Abel W.
Chase, C. W.
†Coburn, A. M.
Coffin, George
Corliss, Charles
Currier, Samuel M.
Cushman, R. P.
Cummings, Henry
Cook, Justice T.
Clark, William P.
Cheever, H. W.
Dewhurst, James
†Davis, Phineas E.
Davis, George W.
Dunbar, Charles H.
Eaton, Harrison
Elliott, Samuel H.
Elliott, Samuel
Emerson, Albert
Emery, Benjamin E.
Emery, Moses G. J.

Farnsworth, J. H.
Farrar, Joseph E.
Fellows, Samuel
Fitts, D. F.
Flanders, Daniel D.
†Fletcher, Edmund
Frothingham, Edw'd G.
Gale, James E.
Gardner, John
George, M. D.
Gile, James F.
Gilman, John P.
Goodrich, T. J.
Grieves, J.
Hale, Samuel
Haseltine, Amos, jr.
*Harding, Thomas
*Harmon, David P.
†Hazeltine, Hazen
Holt, Charles
Hooke, Daniel
How, Moses
Howe, Nathaniel S.
*Hoyt, George H.
Hoyt, Humphrey
Ingalls, E. T.
Jeffers, William
Keely, John
Kittredge, Alfred
Lackey, Andrew
†Lee, George W.
†Little, Edmund B.
†Little, J. G. S.
Longfellow, Samuel
Marsh, John J.
Merrill, William
Mitchell, E.
Mitchell, Seth K.
Morse, John
Morse, S. E.
Nichols, James R.
Nichols, John B
†Nichols, John A.
Noyes, James
Noyes, Johnson
Oberton, W. W. S.
Ordway, Joshua H.
Patch, Paul D.
†Plummer, Hiram
*Porter Ebenezer
Porter, Dudley
Putnam, Moses W.
Randall, John P.
Richards, William B.
Richardson, John B.
Roberts, Stephen
Robinson Edwin
Savary, Robert
Shattuck, L. P., jr.
Slocum, Rufus
Sleeper, Sherburne C.
Smith, Jesse
Smiley, James V.
Spiller, J. B
Stewart, John
Swett, Jackson B.
Taylor, Martin
Taylor, Oliver
Taylor, Levi
Titcomb, Benaiah
Tompkins, Christ'r
Towle, Samuel K.
Turner, James
Wadleigh, Levi C.
Webster, David
Webster, Ebenezer
*Webster, Nathan
Webster, Richard
Webster, E. F.
†Welch, Ezra B.
West, Thomas
West, H. K.
West, James F.
Winchell, James H.
*Wingate Moses
Wheeler, Allison
White, James D.
*Whittier, Leonard
Whittier, Warner R.
Whittier, Alvah

## HAMILTON.

Allen, Francis R.
*Brown, Jacob
Brown, William A.
†Burnham, Choate
Dane, George
Dane, Samuel
Dane, Francis
Dane, George E. F.
Dane, Wm. A.
Dodge, Allen W.
Dodge, Emerson P.
Dodge, George B.
Knowlton, Isaac
Knowlton, Isaac F.
Knowlton, Joseph
Lamson, Jarvis
Morgan, Luther S.
†Norris, George
Patch, Asahel H.
Patch, Oliver Mrs.
Porter Oliver
Safford, Daniel E.
Smith, Alvin
Smith, John
Whittredge, John

## IPSWICH.

*Andrews, David
Andrews, Theodore
Appleton, Daniel F.
Baker, S. N., Jr.
Bond, James W.
Bray, Frederick

Brown, Aaron F.
Brown, Manasseh
Brown, John
Brown, William G.
Caldwell, Abraham
Clark, Erastus
Cogswell, Ebenezer
Cogswell, William
Conant, Gilbert
Dodge, Richard T.
†Farley, Alfred M.
*Farley, Joseph
†Farley, Robert, Jr.
Fall, Tristam B.
Fellows, Alonzo B.
Gould, John J.
Grant, John
Grant, Joshua B.
Green, George H.
Haskell, George
Hobbs, John
Hodgkins, Augustine
Horton, Joseph
Hodgdon, George
Hunt, Samuel
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# TRANSACTIONS

OF THE

# Essex Agricultural Society,

IN MASSACHUSETTS,

FOR THE YEAR 1872,

WITH THE

FIFTIETH

ANNUAL ADDRESS,

BY

HON. WILLIAM D. NORTHEND.

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# ADDRESS.

There are at least four grand natural divisions of the United States. They are known as the Eastern, Southern, Western and Pacific sections. They are by nature distinguished each from the others, by the differences in the character and wealth of their important agricultural productions. These differences, which are recognized by all, arise from the influences of climate, soil, topography and geographical situation.

But the differences in the agricultural productions of the several sections have not been more marked than the differences in the great characteristics of their several populations. The Eastern and Southern sections were settled by people of the same race and nation, yet within a brief period there were developed in each of the two great communities, distinct, national types of character. The original settlements of the Western and Pacific sections were made principally by people from the Eastern section, who, with their descendants, have since exerted a powerful influence in the moulding of the characters of their several populations.

Yet within the short period which has elapsed since their first settlements, there have been developed in the people of these sections great and distinct peculiarities of character, those of each dissimilar from those of the other, and those of both widely differing from the characteristics of the communities of either of the older sections.

That these results in the great characteristics of the people are not accidental, or caused by original difference in race of the populations of the several communities, is further shown from the fact that those who have immigrated from one section to another have, in time, universally assimilated in their characteristics to the people of the section of their adoption.

It can hardly be questioned that the great natural causes which I have stated, especially climate, have determined the agricultural productions of the country, and consequently to a great extent the industrial pursuits of the people, and have been largely instrumental in the production of these diversities in the characters of the people of the several communities.

Climate and the conditions created by or attending it have been the great causes from which were originated the differences in the temperaments, ideas, modes of thought, habits, customs, and in the moral and religious sentiments even, of the people of the several sections; indeed, they may be denominated the primary causes of the different types of civilization which characterize the people of the different great divisions of the country.

Consequently these natural causes, excepting so far as their operations upon the characters of the people of the different communities may be gradually, and to a limited extent, modified with their increased business and social intercourse, will continue to exert their influences in the future, and substantially the same differences in productions and in the characters of the people will ever exist.

Man cannot so far dominate over nature that he can create a uniformity of products in the several sections of the country, or compel homogeneity between the people of the different parts. The people of New England may not desire to conform in their modes of living, thinking and acting to the habits and customs of the people of the Southern, Western, or Pacific sections, and they cannot compel the people of the other sections to conform to the habits and customs which they have established for themselves.

But these differences in productions, and in the character-

istics of our people even, great and fundamental as they are, instead of causing antagonism and conflict, with wisdom on the part of the different communities contribute to the highest interest and advancement of all. Under a just system of reciprocity and co-operation, the variety of our productions inures to the benefit of the people of every section, and the differences in the characteristics of the people of the different parts tend to create a general catholicity of feeling, and to incite a noble spirit of emulation between the different communities, in their intellectual, social and moral advancement.

These truths our fathers comprehended. In devising a system of government for these different communities, they aimed at combining their several powers. They knew that a rope is stronger made from braids than from single threads. They did not attempt to destroy the autonomy of communities, but to provide a system for their co-operation for the general good. They did not attempt to interfere with the wonderful order of nature. They proposed the grand experiment of organizing communities, as individuals, into societies. They established a states-system for the whole country, based upon the internal freedom of the several parts. They left to each large community entire control in all matters which affected its people alone, and they conferred upon the general government which they established, exclusive authority and power to regulate the intercourse of the several communities with each other, and of the whole with foreign nations.

The states-system which had so long existed in Europe depended solely upon precedents, to which each age and nation might give its own interpretations. Our fathers made an advanced step. They organized a Constitutional states-system, in which the rights and duties of all were carefully described and limited.

Under this system, and in accordance with its spirit, all business intercourse between the different sections has been unrestricted. An unconditional free trade policy between the different States has been maintained from the beginning, so that interchange of products could always be made, subject only to the cost of transportation.

Under this policy, each section has been largely benefitted. The people of the Eastern section, extensively employed in manufacturing, have received without imposition of duties a supply of the great staple of the South, and have found a free market for their manufactured goods in the other sections. The people of the Southern section, employed in the cultivation of their great and profitable staple, have been dependent upon the West for their cereals, and the people of the Western and Pacific sections have found in the Eastern and Southern a profitable market for their immense surplus of agricultural products.

But the operations of this system of reciprocity, as developed with the growth of the country and increased facilities of intercommunication, have produced great changes in the industrial pursuits of each section.

It has tended, as do the operations of all systems for promoting business intercourse between different communities, to the division of labor, and to special employments.

In an isolated community, the inevitable tendency is to an increase in the varieties of productions and employments, with a view to make the community self-supporting. But when the energies and productions of different communities are brought into free competition in their several markets, it is found that, owing to the different natural advantages of the several localities, certain agricultural products, indigenous to the soil of all, can be grown in some cheaper than in the others, and similar differences are found in the adaptations of the several localities for the different industrial pursuits, so that the tendency will be in each community to produce for the market only those commodities which it has superior advantages for, and to purchase other commodities which it needs, from its associate communities, which can furnish them cheaper than it can produce them.

Consequently, in discussing the condition of any one great industrial pursuit in either of the large communities of the country, it is important to understand and apply these truths, and to inquire not only into its operations and the relations it

sustains to the other great industrial pursuits of the same community, but to study the character and extent of the productions of the other communities with which there must be competition in the market.

No industry of the country has been affected to such a remarkable extent by the operations of our system of reciprocity as that of the agriculturists of our own section. Until within the last half century, the people of this section were largely self-supporting. The farmer produced nearly, if not all, the necessaries of life. He raised all the grains from which his bread was made, the potatoes and other vegetables he required, his beef, pork and mutton, and manufactured from the fleeces of his flocks clothing for himself and family. He needed money only for his trifling money taxes and for the purchase of a few necessary articles from abroad. And he was compelled to this mode of living from necessity. He had a scanty home market for any surplus he produced, as the population were principally engaged in agricultural pursuits, and with the great cost of transportation, a poor market abroad. So for many generations the farmer, living substantially on the productions of his acres, to use a common expression, brought the year about, perhaps no poorer, and fortunate if richer, at its end than at its beginning. And so he went on through life, working hard and living upon the immediate products of his labor, and leaving to those who came after him the lands which he had inherited, with but little increase or decrease.

But within the last half century, the demands of the world for cotton fabrics, and the extensive cultivation of the staple at the South, and the settlement and cultivation of the vast and fertile prairies of the West, have caused a great change in New England farming.

Within this period, attracted by favorable circumstances and natural adaptations, and stimulated by the artificial aids afforded by protective duties on manufactured goods imported from abroad, the people of New England have turned their attention largely to manufacturing. As a result, large and wealthy towns and cities have grown up, peopled by a non-

agricultural population, which have created large and profitable home markets for agricultural productions. Indeed, to such proportions has this population already grown, that the soil of New England with its present or past cultivation, is insufficient to supply the bread-stuffs needed for its support.

But this system of reciprocity is a system of compensations. Whilst on the one hand it has thus operated to create large and profitable home markets for our agricultural productions, on the other hand it has thrown our markets wide open for competition to agriculturists of the other sections, and the competitor from the West has been able to produce and offer in our markets most of the varieties of cereals cheaper than they can be produced from our own soil. This fact has caused alarm among our farmers. They have been reluctant to abandon the cultivation of crops which they and their fathers before them, regarded as important staples of the farm, and there exists an apprehension that the result may be disastrous to the farming interests of this section in the future.

If, from the character of our soil or climate or from any other circumstances, it should appear that we have peculiar adaptations for the growing of these crops, and that no others will compensate for their loss, there would seem to be ground for such apprehension, but if on the other hand it shall be seen that we can multiply other productions for which our soil and adaptations are as favorable as for the raising of cereals, and if, in addition, we can find a profitable market for such increase, all cause of apprehension will be removed.

Providentially, we are not confined to the raising of these crops, and on the soil on which they have been cultivated we can raise other and as profitable crops as those we are called on to abandon, and for which we have sufficient market. From lands in the neighborhood of the large towns can be produced large varieties of vegetables and fruits, for which, with but little cost of transportation, these towns afford a profitable market, and from the lands more remote can be produced a surplus of hay, for which there is a constant demand. Fields can be advantageously cultivated for hay only in a small por-

tion of the country, and with the increasing demand for it in our cities and towns, all will be needed that can be produced.

But the value to the farmer of the crops that he is called upon to abandon has been much exaggerated. From statistics of the productions of the State of Massachusetts in 1870, it appears that the whole amount of grain produced in the State that year from which bread can be made, is as follows:

| | | |
|---|---|---|
| Indian Corn | 1,327,000 | bushels. |
| Wheat | 35,000 | do. |
| Rye | 232,000 | do. |
| Oats | 733,000 | do. |
| Barley | 126,000 | do. |
| Total | 2,453,000 | bushels. |

It has been estimated that eight bushels of grain are required to furnish bread-stuffs for each inhabitant. The population of Massachusetts in 1870 was 1,457,354, so that the whole amount of grain for bread-stuffs raised amounted to less than two bushels to each inhabitant, sufficient to supply less than one quarter part of the bread-stuffs required for consumption by the people of the State. The value of it, at present prices, would be about $1,700,000, and upon comparison of the statistics of these crops made in 1870 with those made in 1840, it will appear that there has been no considerable increase or decrease in the production of either, whilst in that period our population has doubled.

From the same statistics, it appears that the hay crop of Massachusetts in 1870 amounted to 507,000 tons, which at $35.00 per ton would be of the value of $17,745,000, or more than ten times the value of all the corn, wheat, rye, oats and barley grown in the State the same year.

Whilst, then, it is plain that our farmers cannot raise cereals as cheaply as they can be furnished from the West, yet it by no means follows that the necessary abandonment of their cultivation here is injurious to our farming interest. If our farmers can raise equivalents in the place of these crops, and purchase the grains that they need for their own use even,

cheaper than they can grow them, the change is certainly not to their detriment.

These considerations suggest the very important questions, what shall our farmers raise, and what mode of cultivation shall they adopt from which they can expect the greatest profit?

In considering these questions, we should have regard not only to the crops we should grow in the place of cereals, but to the necessary changes involved in the introduction of so large a non-agricultural population in our communities. Upon examination, it will be found that the location of farms is of primary consequence—whether near to or remote from large towns. Indeed, as lands are now cultivated, the whole system of cultivation of farms in proximity to towns is so different from the system of cultivation of those remote, that they may properly be treated separately.

Farms near to towns have a special value for the raising of a large variety of vegetables and for the production of milk, for which the populations of the towns furnish a ready market. Experience has shown that for the greatest profit this cultivation must be very thorough, and that it should be made a specialty, and that small farms under a high state of cultivation are the most remunerative. But this mode of culture requires very large amounts of manure, which cannot be furnished from the farm, as it is cultivated for crops which are not returned to the soil. This is supplied from the towns—from the stables and the refuse of the streets and dwellings, which can be transported to the farm at little expense, and which without this demand would be of no value. The requirements of farms for the production of milk are different. The farms, to be profitable, must be larger, and, as much of the manure needed for the crops is derived from the stock, there is, of course, less to be transported from the towns.

But farmers remote from large towns have neither these advantages of a market nor of manure, as the cost and time required for transportation are too great in competition with farmers in the vicinity of the towns. The greatest profit on these farms is from the production of hay. This is their

specialty. And these farms for economy of management and for profit, should be large. It is impossible for the farmer to make a living from the production of hay, on the number of acres which would be sufficient for the farmer near to the town.

But hay cannot be produced without manure. The farmer must return to the soil equivalents for what he takes from it in his annual crops, if he would keep up its condition. Every farmer knows that a large portion of the manure applied under the old system was required for the raising of the cereals, and that grass is not so exhausting to the soil as corn. Consequently, if the growing of cereals shall be discontinued, and all the manure of the farm applied in the best manner for the growing of grass, the amount grown will be much larger. But this is not all. There is scarcely a farm in New England upon which there are not beds of muck or other deposite, from which material may be taken, which, incorporated with the manure of the barn-yard, will furnish a large supply of fertilizing matter for the farm. When the farmer learns that he is to look for profits to the surplus of hay he produces, he will soon discover means of increasing the fertility of his fields without resorting to the uncertain fertilizers of commerce. But the fields from which the hay is produced are not the only lands which require the attention of the farmer. The condition of his pastures, in which he feeds his stock a considerable portion of the year, is of great consequence. The pastures of New England, especially those of this part of it, have sadly deteriorated. Most of them will not support one half the stock they did half a century ago. How far they can be economically improved, it is impossible to predict. But all can be improved. Where the pastures consist of good and clear land, they may be cultivated and manured for a few years, and the stock in the mean time turned into the poorer fields, and thus the pastures be fully renovated. Where this is not practicable, they may be much improved for years by a single ploughing and seeding down, even without the application of manures. Any stirring up of their soils will prove beneficial.

These are a few of the suggestions which occur in reference

to the change required in the agriculture of our section. The crops which have been referred to, have been selected not as the only crops to be grown, but as the principal staples for the market. Our farmers, in the necessary rotation of crops, will find it for their advantage to raise more or less of the products which are unprofitable in the market. They will grow some crops for their own consumption, which they can purchase cheaper. But these crops will be subsidiary to the main productions. They will also find with the further growth of our own and the other sections, that additional changes in the varieties of crops to be cultivated will be required. We are advancing fast and far. The various and rapidly increasing industrial pursuits in which the people of the country are engaged, act and re-act upon each other, and all are undergoing constant modifications with the wonderful developments of every year.

Thus the farmer of New England is reaping his share of the blessings which the system of reciprocity organized by our fathers, has conferred upon the people of the country. But this the farmer does not always appreciate. Instead of comparing his condition with that of the farmer of half a century ago, he is apt to contrast the profits of his fields with the profits which, at the present time, capital employed in other industries yields. He sees fortunes made in trade and manufactures which he can never hope to realize from his farm, and it tends to discontent. He even concludes that farming in New England is a doomed occupation. But if he will survey the whole field, and consider all the circumstances and contingencies of the different occupations, he will find much for his encouragement. It is an accepted business axiom that profits are in proportion to the risks. The risks which the men who make large fortunes incur, are seen in the wrecks which are strewed around us. Indeed, the risks of the money making avocations, as they are called, are such, that if prosecuted for a long period, financial ruin is the rule and not the exception.

The farmer does not make large profits. His capital is subject to no risks, except from his own extravagance or mis-

management. With prudence and good husbandry, though his crops may occasionally fail, he can always obtain a good living without sale or mortgage of his lands. His capital is always safe, and his accumulations, though small, are certain. He may not die a rich man, and he will not live a bankrupt.

But let him compare his condition with that of the farmer of half a century ago. It is plain that if he would be content to live as the farmer then did, upon the products of his farm, from his surplus productions, with the market of to-day, he could soon acquire wealth. But the farmer of to-day does not so live, and he has abundant reason to thank God that he is not compelled to. The farmer of to-day lives better than did the farmer of half a century ago. He receives not only the necessaries of life, but enjoys many of its comforts and luxuries. He dresses better, his house is better and more comfortable, and furnished with taste, and even elegance. He has more time and opportunities for reading and study. He mingles more with the world. He invests more in charities. He is enabled to improve himself, and to properly care for and educate his children, the best and noblest products of his farm. He is enabled to accomplish all these things from the profits of his fields, and if at the end of the year he has laid by no more than did the farmer of half a century ago, he has made investments which no calamities in the future can destroy.

But I am reminded by the place of our meeting of "the fields that no man ploughs, and the farm that pays no fee."

These fields are yours, sturdy men of Cape Ann. The boundless deep with its myriad products is spread out before you. The plough, the spade, the hoe, are implements unknown in your farming. Beneath the sounding sea is the vast and fertile garden, which for all time and without cultivation, will furnish the nutriment for your productions. Your farming, though full of toil and danger, is a continual harvest. You are joint tenants of the farm—each gathers where he pleases, without causing any diminution for those who follow.

Your products, like those of the farmer who ploughs his fields, find a free market not only in our own, but in every section of the country.

These views suggest another important and most interesting inquiry to our farmers. It is, whether the great manufacturing prosperity of New England, which is the support of our agriculture, is a permanent one? It is plain that our people have a great superiority for manufacturing, in the future, over the people of the other sections, from the fact that the various branches are here fully established and in successful operation. This fact, other circumstances being equally favorable to all, gives to our people an immense advantage. But this is not all, nor the principal advantage which our people possess over the people of the other sections for success in manufacturing industries.

Industrial pursuits, like natural productions, are largely influenced by natural causes. The peculiar adaptations of our people for manufacturing are traceable to climate and soil as principal primary causes.

Our climate is favorable to the fullest mental and physical development in the people, and operates as a stimulant upon their strength and vigor. It is not so cold as to chill their energies or to dwarf their physical organizations, nor so warm as to produce enervation or lassitude. The winters are long and cold, in which there can be no employment in the fields, and the people from necessity lead an indoor life. The soil is sterile and worn, and can give remunerative employment to only a limited population. The sobriety of temperament, and habits of patience, perseverance and regularity to which these conditions tend, fit and dispose our people for the arduous and unremitting labor of the work-shops.

These conditions give to our people great advantages over the people of the other sections for the successful prosecution of these industries, both in disposing them for the labor, and in enabling them to accomplish more in it. Operatives at the South, owing to the debilitating influences of the heat, are incapable of competing successfully with operatives at the East, and the inhabitants of rich and productive agricultural regions, like those of the South or West, cannot be induced to perform the continuous labor which is required in the shops. As man

is constituted, if the climate where he lives is congenial for out of door pursuits, or if land is plenty and cheap and he can obtain an easy living from it, he will never voluntarily submit to the constant labor and fatigue of the shops as an occupation for life.

The correctness of these propositions is not to be tested by the results of single experiences covering brief periods of time, because so subtle and various are the operations of causes, that it is impossible to determine correctly, from a few instances alone, how far exceptional influences may have affected the result they seem to prove. To arrive at even an approximately correct conclusion from results of experience alone, we must select a long period of time, collect the details and results under the different circumstances of the period, and by a process of generalization bring them all to bear upon the decision to be made.

The fact that within the last few years the people of the South and of the West have turned their attention more than ever before to manufacturing industries, does not prove that the propositions I have above stated are erroneous. The circumstances of the country, since the close of the war, have been exceptional. The duties on imported goods have been higher than ever before, the demand for manufactured articles has been large, and the profits great, so that, for the time, manufacturing may have been remunerative under circumstances far less favorable than those which affect the people of New England.

Under ordinary circumstances, prices of manufactured articles, from competition between manufacturers, will be such that the profits on the capital employed will be in proportion to the profits on capital employed in other pursuits. And as labor enters largely into the cost of manufactured articles, if one section of the country has advantages in labor not possessed by the others, these advantages, other circumstances being the same in all, will inevitably in time give to it a monopoly in manufactures. A very slight difference in the cost of manufacturing will in the end compel those against whom the

difference exists, from the market. If in one section or belt of the country sufficient to supply the whole, any staple production of agriculture can be raised cheaper than in the others, including the cost of transporting it to the market, even if the difference is small, inevitably, in time, that section or belt of the country will have the control of the market in that staple. So, if in one section or belt of the country, under the same conditions, manufacturing can be carried on cheaper than in the other parts, even if the difference is small, as surely that section or belt of the country will control the market in manufactured articles.

At a very early period in their history, the people of New England commenced the erection of mills and the manufacture of the coarser varieties of articles needed by the people of the several Colonies. Although the amount they manufactured was small, it was sufficient to attract the attention of the manufacturers in the parent country, who claimed an exclusive monopoly in the colonial markets for their own goods. Upon representations made by them, Parliament passed a law as early as in 1699, forbidding the transportation of goods of American manufacture, with a view to prevent the people of New England from supplying the people of the other colonies with their manufactured goods. In 1731, commissioners of the Board of Trade considered and made a report to the House of Commons on the subject of American manufactures, in the conclusion of which they say, "From the foregoing statement, it is observable that there are more trades carried on and manufactures set up, in the provinces on the continent of America to the northward of Virginia, prejudicial to the trade and manufactures of Great Britain, particularly in New England, than in any other of the British colonies; which is not to be wondered at, for their soil, climate and produce being pretty nearly the same with ours, they have no staple commodities of their own growth to exchange for our manufactures; which puts them under greater necessity, as well as under greater temptations, for providing for themselves at home." And in 1750, Parliament declared mills for certain kinds of

manufactures in the colonies *common nuisances*, and directed the Governors, on information of two witnesses under oath, to cause the same to be *abated* within thirty days, or forfeit the sum of £500.

Thus early the people of New England, against the remonstrances and even commands of the parent country, established and carried on manufacturing. The business was continued and increased after the separation, and has been carried on under varying circumstances to the successful results of the present time. And now, New England is known at home and abroad as the manufacturing section, as fully and universally as the West is known as the grain-growing, and the South as the cotton-growing sections.

The facts and results of this long experience, as well as the certain operations of natural causes, point to New England as the manufacturing centre of the country in the future as in the past.

The people of other sections may, to a limited extent, carry on successfully some of the coarser manufactures, in which but little skilled labor is employed, and may in exceptional times, as within the last few years, attempt with temporary success to establish other manufactures, but when the affairs of the country are brought back to their normal condition, it will be found that such experiments will result in failure.

The people of New England, with the advantages of the system of reciprocity throughout the country as in the past, will always be able to control the markets of the country in manufactured articles against any domestic competition, and largely, in time, against any competition from abroad; and with the future growth of the different sections, no man can calculate the proportions to which our manufacturing industries will expand, or the amount of prosperity which their expansion will bring not only to the agricultural, but to every other industry of our section.

It is impossible for the people of the United States to overestimate the value of the system of government inaugurated by their fathers. Under it vast communities, which under other

circumstances would have grown into independent nationalities, move in perfect harmony, each independent in the exercise of the rights of self-government, and all united in their intercourse with each other and with the world. And this great political success is paralleled only by the material prosperity which the system has conferred upon the whole people. Instead of each community living upon and conforming its industries to its own natural productions alone, all, without restriction and without payment of tribute, bring the choicest products of their soil and labor to the common market.

Of the immense variety of productions, those that one section can furnish cheaper than the others it offers to all, and those which any section can purchase cheaper than it can produce, it buys of the others, and the people of each section concentrate their efforts on what they can produce to the greatest profit.

And may we not with confidence anticipate the day, when in the light of a higher civilization, the selfishness of communities will yield to the broader and nobler spirit of a common humanity, when all the nations of the civilized world will co-operate to abolish the offices of Customs, to disband the armies of stipendaries they support, and open wide the markets of the world under a system of universal reciprocity.

# THE EXHIBITION.

The Fifty-Second Annual Exhibition and Cattle Show was held at Gloucester, Sept 24th and 25th, 1872.

The people of the town took a great interest in the Fair, and added *eighty-five* names to the list of members from Gloucester.

His Excellency, Gov. Washburn favored the Society with his presence, on the second day of the Fair, and gave a very interesting address at the dinner table, as also did members of the society and other gentlemen.

The Show was very successful in most of the departments. The following entries were made :

| | | |
|---|---|---|
| Horses and colts, | 47 | animals. |
| Cattle—working oxen, | 32 | yokes. |
| Town teams, | 32 | " |
| Bulls, Milch Cows, Heifers, &c., | 53 | animals. |
| Sheep and Swine, | 27 | " |
| Poultry, | 69 | coops. |
| Agricultural Implements, | 7 | entries. |
| Ploughing teams, | 12 | " |
| Carriages, | 5 | " |
| Articles manufactured from leather, | 5 | " |
| Bread, | 19 | " |
| Flowers, | 50 | " |
| Counterpanes and Rugs, | 91 | " |
| Fancy work, | 137 | " |
| Manufactures and general Md'se., | 29 | " |
| Grapes, Peaches, &c., | 29 | " 63 pl'ts |
| Apples, | 38 | " 228 " |
| Pears, | 50 | " 250 " |

# REPORTS, &c.

## FAT CATTLE.

We, the undersigned Committee on Fat Cattle, award the first premium of $10 and Society's Diploma to Lanesville Granite Co., Gloucester, John Butman, Agent.

*Committee*—William Hadley, A. H. Gould, Geo. A. Abbott.

## BULLS.

The Committee report eight entries, and have awarded the following premiums:

Two-years-old and upward, thorough-bred Ayrshire, first premium, diploma and $10, to S. F. Newman, Newbury, for his bull, "Bismarck," 438, Ayrshire Herd Book.

G. W. Herrick, Gloucester, entered a good looking bull, but as no pedigree was given, the Committee were unable to award a premium, and so recommend a gratuity of $8.

Two-years old and upward, thorough-bred Jersey, first premium, diploma and $10, to Francis Dane, Hamilton, for his bull, "Prince Albert," imported in dam from the Island of Jersey.

Second premium of $5, to H. B. Sargent, Salem, for his bull, "Thomas Dudley."

The Committee wish to bring to the attention of exhibitors the importance of handing in written statements of pedigree.

The Committee are obliged to conform to the rule of awarding premiums only where pedigrees are given. The State

Bounty is given our Society under certain conditions, one of which is, that we shall award premiums only to thorough-bred bulls.

Now, how is a Committee to judge correctly of the breed, unless pedigrees are given?

The majority of our cattle are, at the present time, either grades or the so-called native breed. Grades are the best stock that most farmers can afford to keep, and in many cases they answer as good purposes as the thorough-bred; but if a farmer wishes to improve his stock, he must be careful to breed from a good, full-blooded bull, for only in that way can he hope to make real progress.

In the notes of the late Thomas Bates, who had sixty-five years' experience as a breeder of cattle, published in the London Farmer's Magazine, we find the following, which, we think, will be of interest to every farmer:—

"The breeders of Aberdeenshire Cattle have felt the benefit of a cross with what too often were very ordinary Short-Horns. If they try it with the *best* breed of Short-Horns, they will find the result very superior to their past trials. And if they begin with the originals of the Aberdeenshire Cattle, the better the Short-Horn bulls are, so much greater will be the benefit of the cross. This is more absolutely necessary in crossing breeds than even when breeding from pure stock, for if there is any coarseness on either side, the stock is sure to inherit that coarseness; but when free from coarseness there is no fear of crossing different varieties; *but always let the male animal be the one to improve on the female*, that is, let the male be of a superior tribe."

This extract is well worthy of close study, for here is the concentrated experience of many years. We are told that breeders have made the mistake of using too ordinary thorough-bred bulls, that in crossing, if there is any coarseness on either side, the progeny will inherit it; but above all, he says, let the male be of a superior tribe to the female.

If this is true in crossing one breed on another, it would be equally true in crossing thorough-bred bulls on common cows,

of no particular breed; and we should expect the progeny to be more thoroughly stamped with the impress of the bull than in the simple crossing of a thorough-bred on a thorough-bred. On this feature of breeding we should build our hopes of improving the common stock of the country.

To raise up a herd of good milkers, we must in the first place select our best cows, descended from a line of good milkers, if possible. These cows should then be served by a bull of some superior family, thorough-bred, and the progeny again served by a thorough-bred bull, and so on, constantly crossing the best cows with bulls of a superior race.

If this rule was carefully followed out, we should undoubtedly see more fine herds which, although not thorough-breds, would have many of their characteristics and good qualities.

We will give an instance of the beneficial results of the crossing thorough-breds on the common stock of our country.

A writer, (on stock raising,) in Texas, in a recent number of the "Country Gentleman," says, some parties here are owners of three hundred Short-Horn bulls from which the finest calves are raised by the cross between them and the grade Texas cows. "These calves show Durham (or Short-Horn) blood so clearly in every instance that they furnish another proof of the general law, that the stronger and better blooded of two races will give form and impress to the progeny. This fact is remarkably illustrated in these herds. The second and third crosses leave no traces of Texas blood."

The one object for breeding in Texas is for beef, and of course the cross of the Short-Horn answers that purpose admirably; but with us, where milk and butter are our chief objects, a cross of the Ayrshire or Jersey would be better.

Another instance of the prepotency of thorough-bred blood is very noticeable in the marked influence of a Jersey cross on our common stock. The smallest drop of Jersey blood in an animal can almost always be detected by a good judge of the breed.

Now the Jerseys are as thoroughly thorough-breds as any

breed we have, having been bred for a long period of years without any intermixture of foreign blood.

Have we a native breed?

There are many advocates of this so-called breed, who really seem to prefer them to any other breed, and are free to express their opinion to that effect.

We do not read that our forefathers discovered Neat Cattle when they landed on the shores of America, or that they ever found the aborigines of the country engaged in the peaceful occupation of milking cows.

If a Darwinism was admissible, we should say that the only way that a native breed could be accounted for, would be that it had descended by natural selection from the Bison of our western plains, and I must say that I have seen some Scrub Bulls whose appearance would give strength to this idea. Mr. Flint, in his book on Milch Cows, so well expresses my ideas on this subject that I shall quote from it.

He says, "the term 'Native' or 'Scrub' is applied to a vast majority of our American cattle, which, though born on the soil and thus in one sense natives, do not constitute a breed, race, or family, as properly understood by breeders. They do not possess characteristics peculiar to them all, which they transmit with any certainty to their offspring, either of form, size, color, milking or working properties."

He moreover says that he can see no impropriety in the use of the term "Native," when used as descriptive of no known breed, but as applied to the common stock of the country.

"But perhaps the whole class of animals commonly called natives would be better described as grades, since they are well known to have sprung from a great variety of cattle procured in different places, and at different times, on the continent of Europe, in England, and in the Spanish West Indies, brought together without any regard to fixed principles of breeding." The first importation of cattle into New England is said to have been in the year 1624.

Under these circumstances, it would be more appropriate to discard the name of "Native," and call our common stock by the name of "Grades."

Let me ask those who are inclined to sneer at the merits of thorough-bred animals: Could the "Native" or "Grade" stock ever have reached the position they now hold in public estimation without the help of the thorough-bred? I claim that the good qualities of our common stock are largely due to the influence of the thorough-bred blood from which, in some way or other, they are more or less descended.

As an instance of how a drop (as it were) of thorough-bred blood will cling to an animal, let me give a case which has lately come under my notice.

The famous cow "Sibyl," fifteen-sixteenths Jersey and with one-sixteenth Ayrshire blood in her veins, although 13 years old and always bred to Jersey bulls, has lately dropped a red calf, showing almost conclusively that the Ayrshire blood has at last asserted its right to be seen in her offspring.

Now, I believe it is just these drops (as it were) of thorough-bred blood to which, in a great part, we owe the good qualities of many of our so-called "Natives."

J. D. W. FRENCH, Chairman.

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## MILCH COWS.

The Committee on Milch Cows award to Henry G. Kimball, of Bradford, the first premium of $15 and diploma, for his four-year-old grade Dutch cow.

The second premium of $10, to G. W. Herrick, of Gloucester, for his grade cow, seven years old.

The first premium of $10 and diploma, to Francis Dane, of Hamilton, for his thorough-bred Jersey cow Minnie, eight years old.

*Committee*—Benjamin P. Ware, James P. King, William R. Putnam, Moses A. Plummer.

STATEMENT OF HENRY G. KIMBALL.

BRADFORD, Sept. 24, 1872.

Entered by Henry G. Kimball one grade Dutch cow, four years old. She dropped her last calf the first day of June last; she is with calf to calve the tenth day of May next. The first ten days after calving she gave 22 1-2 quarts of milk per day. At that time her feed was good pasturing with two quarts of meal every morning. The first ten days in September she gave 19 quarts of milk per day. At that time her feed was poor pasturing with two quarts of meal in the morning, and a handful of green corn fodder in the evening. The last ten days of August she gave 20 quarts of milk per day.

STATEMENT OF G. W. HERRICK.

GLOUCESTER, September, 1872.

My grade cow, seven years old, calved May 13th, 1872. The first ten days in June her average mess was 20½ quarts per day. For the last ten days in August her average mess was 14 quarts per day. Her feed was common pasture until July first, with two quarts of meal per day, then she had corn fodder instead of meal.

STATEMENT OF FRANCIS DANE.

HAMILTON, Sept. 20th, 1872.

TO CHAS. P. PRESTON, ESQ., Sec'y of Essex Agri'l Society.

I enter for premium one thorough-bred Jersey Milch Cow, "Minnie," eight years old. She dropped her last calf June 27th, 1872, and will next calve April, 1873. Gave thirteen quarts for the first thirty days after calving, averaged eleven quarts and a half through the month of August. Seven quarts of her milk will make one pound of butter. Food, grass.

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## HERD OF MILCH COWS.

The Committee report that as but one entry has been made, we find it not a very difficult task to decide which was

the best Herd. The Committee also regret very much that there were not other Herds of Milch Cows entered for premium.

Mr. Francis Dane entered for premium five pure Jersey Cows, which were fine specimens of that breed. Their keeping since June has been grass, and their appearance indicates that they have had enough of it. They have averaged ten quarts of rich milk each per day, and from forty-five to fifty pounds of butter per week, through the season of grass.

We award to Francis Dane, of Hamilton, the first premium, diploma and $15.

*Committee*—Horace C. Ware, Salem ; Charles Perley, Boxford ; George Haskell, Essex.

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## HEIFERS.

### REPORT OF COMMITTEE UPON HEIFERS.

#### THREE YEARS OLD.

John Erwin, Jr., of Gloucester, native, premium $5.

#### TWO YEARS OLD.

Eben Dale, Gloucester, Jersey, premium $5.

G. W. Herrick, Gloucester, grade heifer, second premium $5.

John Perkins, Essex, grade, first premium $5.

Francis Dane, Hamilton, Jersey " Clara," premium $5.

#### YEARLINGS.

Francis Dane, Hamilton, Jersey " Fawn 3d," premium $5.

F. S. Lovett, Beverly, grade, first premium $5.

Washington Burnham, Essex, grade, second premium, $3.

*Committee*—John L. Shorey, Jasper Rea, Benj. E. Emery, John Stone.

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## WORKING OXEN AND STEERS.

The Committee award for Working Oxen, the first premium to Thomas G. Ordway, of West Newbury, diploma and $12.

Second premium to Pigeon Hill Granite Co., Rockport, $10.

Third premium to R. S. Bray, of Newbury, $8.

For Working Steers, second premium to Joseph Kittredge, of No. Andover, $5.

For best teamster of oxen, to William H. Finley, of Danvers, the Loring premium of $10.

*Committee*—Francis Dodge, James T. Carlton, Moses H. Poor, Andrew Dodge.

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## TOWN TEAMS.

The Committee on Town Teams report thirty-two pairs of oxen entered for premium, of which nineteen pairs were from Gloucester, and thirteen pairs from Rockport. Also, three teams of horses from Gloucester, one of 8, one of 6, and one of 4 horses.

Your Committee are of the opinion, that this is the best show of Town Teams ever exhibited by our Society, particularly the ox-teams. The President of our Society generously put into the hands of the Committee the sum of fifty dollars, to be awarded in special premiums, in addition to the one offered by the Society.

We award a premium of $30, viz.: $25 offered by our Society, and $5 of the special premium, to the Gloucester Town Team of oxen.

Also $30 of the special premium to the Rockport Town Team of oxen.

And $15 of the special premium to the Gloucester Town Teams of horses, as follows:

| | | | |
|---|---|---|---|
| To Abraham Day's | 8 horse team, | - | $5 00 |
| " Collins Bro's. | 6 " " | - - | 5 00 |
| " Town of Gloucester, | 4 " " | - | 5 00 |

*Committee*—Thomas P. Gentlee, John K. Cole, Eben King, Moses Knowlton.

## STEERS.

The Committee on Steers report two pairs yearling steers entered for premium.

They award the first premium of $4, to Joseph Kittredge, of No. Andover, and the second premium of $3, to George James, of Gloucester.

The steers of Dr Kittredge attracted much attention. They were perfectly handy, and under better discipline than one half the oxen at five years old. They were driven by a boy of Dr. Kittredge with a small cart, who had handled the steers and showed the Committee that he knew how to drive oxen. The advantage of making these steers handy when so young is not only to the steers, but to the boy who handled them also. He has learned how to drive oxen, which is of vast importance to him as a farmer. The Doctor informed the Committee that they were thorough-bred Durhams, and no doubt if they are kindly used and well fed, they will make a large pair of oxen.

Paul T. Winkley, *Chairman.*

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## STALLIONS.

The Committee on Stallions make the following report:

First premium, diploma and special premium, to Francis Dane, Hamilton, for his "Young Morrill, Jr.," four years old. No other competitor presented.

### THREE YEARS' OLD CLASS.

First, Jacob Rhoades, Lynn, "Messinger."

Second, H. L. Hill, Andover; no name given for his colt.

There being no competitor for either the second or third premium in the four-year-old class, the Committee thought proper to award an extra premium of $3 to the three-year-old colt owned by T. B. George, Danvers, for "Diamond."

Samuel C. Oliver, *Chairman.*

## BROOD MARES.

The Committee appointed by the Essex Agricultural Society to examine and report upon Brood Mares at their Annual Fair, held at Gloucester on Sept. 24th and 25th, having attended to that duty, submit the following report:

Your Committee consisted of the following named gentlemen:—O. S. Butler, Dr. W. Cogswell, Asa T. Newhall, Joseph B. Spiller, Z. C. Wardwell, all of whom reported themselves promptly at the hour named, except Mr. Spiller. Of Brood Mares there were four entries by the following named persons: Francis Dane of Hamilton, Charles B. Sargent of Newburyport, Moses K. Noyes of Newbury, and William Jones of Gloucester. Neither of the above named persons, except Mr. Francis Dane, fully complied with the requirements of the society in making their entries.

On proceeding to the Fair Grounds, your Committee made diligent search for brood mares, and after wandering up and down the line of cattle-pens they found three mares with their foals by their sides, and before leaving the grounds your Committee found a brown mare with her foal, but were unable to ascertain by whom she was entered, as there was neither card or mark upon horse, colt or pen; and as no keeper or owner was present to give us any information, and as the horse could not speak for herself, she was left in solitude and silence. It is possible that she belonged to Mr. Jones, of Gloucester.

The first horse examined was Mr. Dane's Percheron mare Empress. She is a noble specimen of the Percheron horse and is described as follows:—She was imported from Percheron, France, is about ten years old, is perfectly sound, and weighs about twelve hundred pounds.

Your Committee are of the opinion that the society ought to encourage the importation and propagation of this breed of horses into Essex County, as a draft horse. For all farm purposes the Percheron has no superior and hardly an equal. The Clyde horse is his only competitor. Every farmer must see, that if one horse will do the work of two, at the same relative cost of purchase and keeping, (which is true of the

Percheron horse,) he will be largely the gainer by the introduction of this breed of horses.

The second horse examined by your Committee was a Bay mare with her foal, entered by Mr. Moses K. Noyes of Newbury, without description or record, but in charge of a very honest and intelligent young farmer. This is a very promising young horse, and in form and feature, in limb and motion, showed very remarkable points for a good family horse or a horse for all work ; and your Committee are of opinion that more attention should be given to breeding this class of horses. If you go into our market, you will find it full of inferior animals ; if you desire speed, you can find it ; if you desire style, it is there ; if you are looking for a draft horse, he is found in every market ; but if you desire a perfectly developed and thoroughly trained family horse, you will have to wait long, and when found, the owner takes your bottom dollar before he parts with his family pet. If you do not believe it, just give your order to the most responsible horse dealer in the county for a family horse, with the following description : 1st, he must be sound as a rock from head to heel ; 2d, he must be from unexceptionable parentage ; 3d, he must stand squarely upon good clean limbs that grow out of a good round black foot, neither too high or too low ; 4th, he must be fifteen and one-half hands high, with his head so set upon good bracing shoulders, that he needs neither check-rein or martingale to keep it in place ; 5th, he must be free from all tricks or dangerous habits, in the stable or out of it, not afraid of any object or timid in the presence of danger ; and if he is a good feeder, all the better, and, if possible, let his color be a bright dark bay, with black mane and tail ; his weight must not exceed eleven hundred nor be less than ten hundred pounds. And now, if you have made up your mind not to ride until your horse arrives, you will go on foot a long time.

Mr. Noyes' horse does not answer the above description by several points, but by a judicious crossing with the Morgan or English blood, her stock might be improved so as to give a very good foundation for a family horse.

The third horse examined by your Committee was a mare with her foal, entered by Mr. Charles B. Sargent of Newburyport, with the following description :—She is a cross-blood, the Morgan with the St. Lawrence. She was raised by Mr. Battell of Newburyport; is fourteen years old.

The above named horse is a very superior animal, well marked, properly developed and has taken premiums at one or more of the New England Fairs, but in consequence of a defect, by a rule of your Society, she was not entitled to a premium.

The fourth horse entered at the Secretary's office, your Committee did not examine, as we had no certain means of knowing what horse it was, or whether she was entered for a premium or for an addition to the show. She might have possessed qualities that would have entitled her to the first premium; but the Committee had no means of knowing it, consequently, your Committee were of the unanimous opinion that only two brood mares were entitled to premiums, as follows :

First premium, $15, with diploma, to Empress, owned and entered by Francis Dane of Hamilton.

Second premium, $10, to Bay mare, ———, owned and entered by Moses K. Noyes of Newbury.

In closing our report, we would make a suggestion or two in reference to entries and to the awarding of premiums.

First, all entries of stock should be made in strict accordance with the rules of the society; that is, there should be a carefully prepared description, fully written out, of the animal entered. This statement should be prepared *before* and not after arriving on the ground, and there should be no deviation from this rule. Suppose, for example, the animal entered is a brood mare with her foal by her side; it is important for the Committee to know very many things before deciding upon the real merits of the Dam :—First, the description should state the age and place of birth, her pedigree, if possible, the number and character of her progeny, her habits and disposition, her endurance and reliability, as well as the most satisfactory evidence that the animal is free from all physical

defects, for all or any of the above characteristics in the dam have an important influence upon her offspring; and if we ever intend to improve this class of stock in Essex County, we must pay more attention to these things, and if our Society is to be a means of securing that improvement, it must be more stringent in its requirements of those who ask for its premiums and diplomas. The owners of stock ought always to be in attendance upon the Committee at the time of examination, so that they may answer any questions the Committee may ask. Then the premium list should be carefully revised and improved by offering large awards for the best blooded stock. If you look over your annual shows, it will be observed that the Hall department is usually fully up to the standard, with the present list of premiums. The cattle-grounds are sadly deficient. Let the premiums be doubled or even trebled on real meritorious stock; then let there be suitable protection from the weather by temporary sheds, so that if there should be a long, cold storm, the animals would not be exposed to danger; then have competent committees attend faithfully to their duties and decide impartially on the merits of stock examined, and you would see more empty barns and pastures throughout the county on the days of the fair, and our stock-yards on the fair-grounds would compare favorably with any County Show in the State, both in respect to numbers and quality; for instead of injuring the Society, it would lift it at once upon a higher plane of usefulness. As you raise your standard and premiums, you increase the value of your decisions and diplomas. When you have done that, stock-owners will be as anxious to get your awards as those of any other society in the land, especially the owners of the best stock.

We hope to live to see the day when a first premium with diploma shall add twenty per cent. to the market value of the animal, and the lower premiums in that proportion. We shall be told that the Society cannot afford to increase its premiums and expenses. *This is not true.* It cannot afford to follow its present policy, if it means to live as an *Agricultural* Society.

Let the boast never be heard again that we have more than

twenty thousand dollars in funds, while our cattle-pens are empty. Let it be our boast that we raise and own the best stock in the old Bay State, and that our annual show brings to our fair-grounds the best stock raised in the country.

We should remember that our Society is not a Savings Bank; its object is not to see how much money it can make and save, but how much money it can raise and judiciously award in premiums for the encouragement of every branch of agriculture in the county. And we may rest assured that such a policy would not tend to poverty; but, on the contrary, if the same law holds good here as in all other business, then the giving that maketh rich would fill our treasury to overflowing. Let the experiment be tried.

All of which is respectfully submitted.

*Committee*—O. S. Butler, Wm. Cogswell, Asa T. Newhall, Z. C. Wardwell.

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## FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and awarded the following premiums, viz.:

The first premium of diploma and $15, to George James, of Gloucester.

The second premium of $10, to Samuel E. Sawyer, of Gloucester.

The third premium of $8, to C. C. Cressy, of Gloucester.

*Committee*—E. G. Berry, David Stiles, Washington Burnham, J. A. Savary, John D. Cross.

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## FARM AND DRAFT HORSES.

The Committee on Farm and Draft Horses award:

To Henry L. Tenny, of Newbury, diploma and first premium of $12.

To John Clark, of Gloucester, second premium of $10.

To George Dennin, of Gloucester, the third premium of $8.

To Edward H. Little, of Newbury, the fourth premium of $5.

Special premium offered by Dr. Geo. B. Loring for best teamster, of $10, to Edward F. Little, of Newbury.

Special premium of citizens of Gloucester, of $25: first premium to Curtis C. Cressy, of Gloucester, of $15; the second premium to Bennett Griffin, of Gloucester, of $10.

*Committee*—A. B. Fellows, Rufus Slocomb, Bennett Griffin, T. K. Leach.

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## COLTS—FIRST CLASS.

REPORT OF COMMITTEE ON FIRST CLASS COLTS.

*Four Years Old.*

To J. Otis Winkley, of Newburyport, the first premium, $10 and diploma.

To C. Mitchell, of Beverly, the second premium, $6.

To Curtis C. Cressy, of Gloucester, the third premium, $4, for his colt sired by Benedict Morrill.

There were several fine colts of this age entered; one by Aaron Knowlton, of Essex, deserving of special notice.

*Three Years Old.*

To George James, of Gloucester, first premium, $8.

*Committee*—E. K. Lee, Horace Ware, Horace C. Ware.

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## COLTS—SECOND CLASS.

The Committee on Colts have awarded premiums as follows:

To F. Dane, Hamilton, first premium of $6, on two years old colt, sire Gray Eagle, dam Florence.

To John Perkins, Essex, second premium of $2, on two years old colt.

To F. S. Lovett, Beverly, yearling colt, first premium, $6.

*Committee*—J. L. Colcord, A. P. Noyes, Thomas Sawyer.

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## SWINE.

There was but one entry in this department fulfilling the requirements of the Society, and your Committee, without an opportunity for debate or disagreement, award to Joseph Kittredge, of No. Andover, second premium of $5, for his breeding sow.

*Committee*—John S. Ives, Henry W. Foster, N. T. Harris.

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## SHEEP.

First premium, diploma and $8, for best flock sheep, to Francis Dane, Hamilton.

First premium, $3, for best lambs, to Francis Dane, Hamilton.

*Committee*—Joseph Kittredge, Richard Ward, Aaron Dodge, Asa Wade, William H. Felton.

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## POULTRY—FIRST CLASS.

The Committee having examined the various coops containing (with a few exceptions) an excellent show of the feathered tribe from all parts of the county, would like to make a few

suggestions which would be, as they think, for the interest of both Society and exhibition. We would suggest that premiums be offered for fowls and the same amount for chicks not less than four months old, in their respective classes, as it does not seem to be hardly fair for chicks to be obliged to compete with fully developed fowls, and the Committee noticed spring chicks of great excellence, which should have received premiums, had there been any offered by the Society. We think that it would also be an improvement to offer premiums for the different breed of ducks and geese, as we think it would tend to make the show of these beautiful and profitable fowls larger and of greater excellence. The Committee were highly pleased with the trio of White Brahmas exhibited by Ordway Brothers of West Newbury, which, as Mr. Ordway informed them, were brought to their present state of purity after three years of careful breeding, which speaks well for the judgment and skill of the breeder. We have made these few remarks, as we think they would tend to help the exhibition and, as we know, better satisfy the exhibitor. As this is one of the most profitable branches of farming, we think it the duty of the Society to do all that they can to increase the interest in this pleasant business, for it would be hard to find a person, either young or old, who does not like to look upon the stately Asiatics as they tread with lofty grandeur about his premises, or the small (but mighty) Bantams as they march in all their glory among the flock. And we believe that no part of farming pays better for the capital invested than this, either in eggs or poultry. To be profitable, there must be some care and labor expended, as in any other business, as you cannot expect to have fowls thrive if allowed to become diseased and covered with vermin, as they surely will if not kept clean and their pens purified at least twice a year. For the prevention of vermin we have found carbolic soap and powder to be an excellent thing, and would recommend its use to all interested in poultry Perhaps it would not be out of place if we were to give our experience in keeping the different breeds, at any rate it can do no harm. We will begin with the Brahmas, which for all purposes we

consider the best, if the right class is bred, as there is, as we have found, two different kinds; namely, the long-legged, coarse race, which we consider worthless, and the short-legged, full-breasted and plump birds, which make the best of table fowls and come to maturity early. This class of Brahmas we can safely say are as good fowls for eggs and for the table as can be found.

The Cochins we have found to be a great deal coarser and not so good layers as the Brahmas, therefore, if only one kind is kept, we should say the Light Brahmas were the best of any of the large or Asiatic breeds. Of the French breeds we have only tried to any extent the Houdans; these we have found to be hard to raise and poor layers. They will lay very well for two or three months in the spring, and for the remainder of the year, if we depended upon them for our custards and puddings, I think we should not be troubled with these delicacies. We consider the Dominique the best breed for poultry and eggs in the whole list from Brahmas to Bantams. The chicks when three months old are, if well fed, plump and fat and their flesh being very yellow make them an excellent market fowl, and they will lay, in our opinion, more eggs during the year than any other kind.

If any pure breed is not sought for, we would speak a good word for the cross between the Brahmas and Dominique or Dorking, as we find them to equal if not excel any other kind, especially for the table. If any interested in poultry can find anything new or interesting in these random remarks, we shall feel as though we had not spent our time without benefitting any of our brother fanciers.

The following premiums and gratuities are awarded:

*Light Brahmas.*

| | |
|---|---|
| Robert Winn, Salem, first premium, - - - | $3 00 |
| Ordway Brothers, West Newbury, second, - - | 2 00 |

*Dark Brahmas.*

G. D. Walton, Peabody, first premium, - - $3 00
E. H. Brown, Gloucester, second, - - - 2 00

*Buff Cochins.*

E. R. Perkins, Salem, first premium, - - - 3 00
Andrew Lufkin, Gloucester, second, - - - 2 00

*Partridge Cochins.*

D. B. Wallace, Peabody, first premium, - - 3 00
C. P. Barrett, Gloucester, second, - - - 2 00

*Black Cochins.*

Ordway Brothers, West Newbury, first premium, 3 00
E. R. Perkins, Salem, second, - - - - 2 00

*Geese.*

Joseph Horton, Ipswich, first premium, - - - 2 00
D. Haskell, Rockport, gratuity, - - - - 1 00

*Ducks.*

E. R. Perkins, Salem, first premium, - - - 2 00
G. W. Herrick, Gloucester, gratuity, - - 1 00

*Gratuities.*

Ordway Brothers, West Newbury, White Brahmas, 1 00
E. R. Perkins, Salem, White Cochins, - - 1 00
C. P. Barrett, Gloucester, gratuity, - - - - 2 00
Best Collection, E. R. Perkins, Salem, diploma.

*Committee*—J. Otis Winkley, Newburyport; John I. Ladd, Groveland; Charles A. Beckford, Salem.

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## POULTRY—CLASS SECOND.

The Committee on Poultry award premiums as follows, viz.:

E. R. Perkins of Salem, best trio of Dorkings, first premium of $2.

C. A. Beckford, Salem, best tro of Bantams, first premium, $2. E. R. Perkins, second premium, $1.

E. R. Perkins, first and second premiums on Hamburgs, $3.

E. R. Perkins, Plymouth Rocks, first premium, $2. D. B. Wallace, second premium, $1.

E. R. Perkins, Dominiques, first premium, $2. Ordway Brothers, second premium, $1.

E. R. Perkins, Leghorns, first premium, $2. Aaron Low, second premium, $1.

A. P. Lufkin, Black Spanish, first premium, $2.

E. R. Perkins, Polish Fowls, first and second premiums, $3.

D. B. Wallace, Games, first premium, $2.

*Gratuities.*

Edwin F. Hoyt, coop of Houdans, $2.
E. R. Perkins, Sultans, $2.
Ordway Brothers, Bolton Gray fowls, $2.
C. P. Barrett, Gloucester, coop of Pigeons, $1.

*Committee*—John Swinerton, Charles C. Blunt, James Flint.

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## PLOUGHING—WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams report that only three teams were entered for premiums: R. S. Bray and E. H. Little of Newbury, Joseph Horton of Ipswich, and Samuel James of Gloucester.

The land ploughed was well adapted to test the skill of the ploughmen. Stones would occasionally break the furrows and thus prevent that uniformity, which good ploughmen always strive to show and which is considered by the inexperienced essential to good ploughing. With only three teams, your

Committee were able to watch closely the management of each and how the skill of the ploughman was promptly exerted to counteract the effect of obstructing stones and to keep straight and even his furrows.

If the Committee were disposed to look for faultiness, it would be found, perhaps, in the speed with which each teamster attempted to *outdrive* his competitors. We are aware that a team moving rapidly, with no obstructions to interrupt, will throw over the furrows more evenly than one going slowly. But your Committee think, that had each team moved at a more natural gait, the furrows would have shown a less broken surface when stones were struck, and the whole work would have appeared quite as well. And the well trained, patient oxen, always willing to exert their strength at the word of their master, would not have shown unmistakable proof that they had been driven at an unnatural speed. As is generally done, your Committee reminded these competitors that the premiums would be given for the *best* work—not for that done most quickly. We hope to see an improvement in this respect in the future.

The work done by Mr. Horton's team was very good, enough so to have merited the first premium; but the furrows were laid a little more straight and uniform by Bray and Little's team, on a lot which the Committee judged to be the most difficult of the three to plough well.

The Committee unanimously award to R. S. Bray and E. H. Little of Newbury, with Prouty and Mears Eagle Plough, No. 20, the first premium of $12 with diploma.

To Joseph Horton of Ipswich, with Ruggles and Nourse Eagle, No. 20, the second premium of $10.

To Samuel James of Gloucester, with Hussey Plough, No. 3, the third premium of $9.

*Committee*—John Keely, Philip Jones, Wm. B. Morgan, James T. Carleton, Sidney J. Newman.

## PLOUGHING—SINGLE TEAMS.

The Committee on Ploughing with Single Teams report that there was but one competitor for the premiums.

Mr. Thomas G. Ordway, of West Newbury, came upon the ground with a fine pair of oxen and a Hussey Plough, No. 16. He ploughed his lot seven inches in depth, making excellent work, in fifty-eight minutes. The Committee recommend that Mr. Ordway receive the first premium of Ten Dollars.

*For the Committee*—Joseph S. Howe.

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## PLOUGHING—WITH HORSES.

The Committee on Ploughing with Horses have attended to that duty and respectfully submit the following report:

To Curtis C. Cressy, of Gloucester, first premium of $12 and diploma.

To Sylvester Dane, of Hamilton, second premium of $10.

To Edward H. Little, of Newbury, third premium of $8.

To Henry L. Tenney, of Newbury, fourth premium of $6.

*Committee*—Aaron Low, J. L. Newhall, Daniel Richards, T. A. Rogers, Henry Hobbs.

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## PLOUGHING—WITH SWIVEL PLOUGH.

Your Committee on Ploughing with Swivel Plough would report but one entry, which was made by Wm. Foster of North Andover, who did the work in a very satisfactory manner to your Committee, and they would award him the first premium of Twelve Dollars.

*Committee*—Edward H. Little, Wm. H. Brown, S. A. Merrill, Charles Perley, Henry G. Kimball.

## PLOUGHING—BY BOYS.

The Committee on Ploughing by Boys of 18 and under are unanimous in awarding the first premium of $25, to William H. Finley, 17 years of age, of Danvers, who used the Conical Plough, No. 5¼. He finished his lot in one hour seven minutes by ploughing thirty-two furrows.

Second premium of $15, to Willie Merrill, aged 16, of West Newbury, with the Hussey Plough, No. 3, in one hour two minutes by twenty-nine furrows.

Third premium of $10, to Willie G. Horton, aged 15, of Ipswich, with the Hussey Plough, No. 16, in one hour five minutes by twenty-nine furrows.

They all did excellent work with which the Committee were much pleased.

*Committee*—Benjamin P. Ware, Robert A. Smith, Josiah Newhall, E. G. Berry, Francis Dodge.

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## AGRICULTURAL IMPLEMENTS.

Premiums awarded by Committee on Agricultural Implements :

To E. E. Lummus, of Boston, for best collection of implements and machines, diploma and $15.

To Whittemore Brothers, of Boston, for best Hay or Straw Cutter, $3.

To E. E. Lummus, for Randall's combined Harrow and Seeder, gratuity, $3.

To F. F. Holbrook & Co., of Boston, for Hand Cultivator, gratuity, $1.

To F. F. Holbrook & Co., for Taylor's Hay and Grain Rake, gratuity, $2.

To F. F. Holbrook & Co., for Swale Plow, gratuity, $2.

To Ames Plow Co., of Boston, for American Hay Tedder, gratuity, $3.

To Ames Plow Co., for Perry Mower, $3.

To W. G. Prescott, of Hampton Falls, for Eureka Mower, gratuity, $5.

*Committee*—David Smith, David Stiles, William B. Morgan, Thomas K. Bartlett.

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## CARRIAGES.

We, the undersigned Committee on Carriages, award to Loud & Brothers, of West Amesbury, diploma and first premium, $15, for Top Buggies and Concord Wagons.

Second premium, to H. G. & H. W. Stevens, of West Amesbury, $10.

Third premium, to Pike & Whipple, of Peabody, for Express Wagons, $5.

*Committee*—Andrew Lane, Aaron Sawyer, James Wilson.

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## DAIRY.

[illegible] of last year, as containing much valuable information.

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They all did excellent work with which the Committee were much pleased.

*Committee*—Benjamin P. Ware, Robert A. Smith, Josiah Newhall, E. G. Berry, Francis Dodge.

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## AGRICULTURAL IMPLEMENTS.

Premiums awarded by Committee on Agricultural Implements.

The Trustees do not wish to be understood as endorsing the award of the Committee on Agricultural Implements, of the gratuities to the American Hay Tedder and Perry Mower, or as recommending them as desirable machines.

BENJAMIN P. WARE, } Committee on
J. B. SWETT. } Trustees.

To Ames Plow Co., of Boston, for American Hay Tedder, gratuity, $3.

To Ames Plow Co., for Perry Mower, $3.

To W. G. Prescott, of Hampton Falls, for Eureka Mower, gratuity, $5.

*Committee*—David Smith, David Stiles, William B. Morgan, Thomas K. Bartlett.

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We, the undersigned Committee on Carriages, award to Loud & Brothers, of West Amesbury, diploma and first premium, $15, for Top Buggies and Concord Wagons.

Second premium, to H. G. & H. W. Stevens, of West Amesbury, $10.

Third premium, to Pike & Whipple, of Peabody, for Express Wagons, $5.

*Committee*—Andrew Lane, Aaron Sawyer, James Wilson.

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## DAIRY.

There were seven specimens of Butter entered for premiums, the quality of which was not quite equal to that of some previous years, but after a careful consideration the Committee report the award of the following premiums, viz. :

To Mrs. Sarah L. Ridgeway, of West Newbury, first premium, "Harris on Insects" and $10.

To Francis Dane, of Hamilton, second premium, $8.

To Mrs. Oliver Patch, of Hamilton, third premium, $6.

To Joseph Hale, of Rowley, fourth premium, $4.

There were no Cheese entered.

In this connection we would call particular attention to the report of the Committee on the dairy of last year, as containing much valuable information.

*Committee*—James Chamberlain, George L. Hawkes, Thomas G. Ordway, Farnham Stiles.

STATEMENT OF SARAH L. RIDGEWAY.

WEST NEWBURY, Sept. 25, 1872.

GENTLEMEN :—I enter for premium fifteen pounds of September butter, made in the following manner :

The milk was strained into thoroughly scalded tin pans and allowed to remain thirty-six hours, then skimmed into tin pails and stirred at every skimming. As soon as churned the butter was rinsed in cold water and salted to the taste with rock salt, worked twice and prepared as presented.

STATEMENT OF FRANCIS DANE.

HAMILTON, Sept. 24th.

TO THE COMMITTEE ON DAIRY :—I present for premium twenty-four pounds of butter, made from the milk of Jersey cows. It was allowed to stand thirty hours, then the cream taken off and churned, which takes from fifteen to twenty minutes. When the butter is taken from the churn it is put immediately into ice-water and worked until all the butter milk disappears, then salted, one ounce to a pound. After twenty-four hours worked again and formed as presented for premium.

STATEMENT OF MRS. OLIVER PATCH.

TO THE COMMITTEE ON DAIRY :—I present for premium nineteen pounds of butter, made last week from the milk of two cows of the Buffalo breed. Process of making—after straining the milk, let it stand from twenty-four to forty-eight hours, according to the weather, always being careful to skim the cream before the milk turns. Stir the cream daily, adding to it a little salt, and churn usually once a week. Add about a pint of cold water to the cream at churning, as it churns easier and comes quicker. Never put water to it after it comes. Salt generally about an ounce to a pound. Let it stand over

night, then work it over, weigh it out into pound lumps ready for market, in the same shape in which it is to-day offered for premium.

STATEMENT OF JOSEPH HALE.

To the Committee on Dairy.—*Gentlemen:*—I offer for premium sixteen pounds of butter. This is a sample of forty-two pounds made from the milk of seven cows in one week. Feed, common pasture and corn fodder, no grain. The cows are Ayrshire, Jersey, Durham and Native, all good cows for butter, which I consider more essential than breed, although I think a cross of Ayrshire and Jersey would be my preference.

Process of making—strain into well scalded pans, milk not over three inches in depth. Let it stand from twenty-four to thirty-six hours, according to the weather, (careful to skim the cream before the milk turns.) Stir the cream daily, and keep in a cool room. When put into the churn add about a pint of cold water, or a small piece of ice. When churned, taken and worked by hand, salted, a little less than an ounce to the pound, let it stand twenty-four hours, work it over, (careful to get out the butter-milk,) then weigh into pound lumps, and with clappers form as presented for premium.

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## BREAD AND HONEY.

Your Committee, after testing the fifteen specimens of Bread exhibited, award the following gratuities, viz.:

To Edith B. Jones, Gloucester, $3.

To Mrs. N. E. Ladd, Groveland, $3.

To Mrs. John C. Calef, Gloucester, $2.

To Mrs. D. H. Stickney, Groveland, $2.

To Miss Laura N. Pool, Rockport, $3.

To Mrs. Abby A. Herrick, Gloucester, $1.

*Pies and Cake.*

To Mrs. John J. Somes, Gloucester, for cream cakes, $1.

To Mrs. Israel C. Mayo, Gloucester, for one Washington pie, $1.

No entries of bees and honey.

*Canned Fruit.*

To Mrs. Denmark Procter, Gloucester, for one dish grape, apple and orange jelly, $2.

To Mrs. E. J. Hudly, Gloucester, for twelve jars preserves, $3.

To Mrs. M. V. B. Perley, of Gloucester, two jars peach preserves, $1.

To Mrs. F. F. Emerson, Gloucester, canned pears 50 cts.

*Committee*—Charles Ingalls, J. A. Montgomery, Henry Alley, M. S. Jenkins, John J. Gould.

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## FRUIT—SPECIAL PREMIUMS.

The Committee under the offer of a special premium by Mr. Francis H. Appleton, for the best collection of fruit raised in the County, report that they award the first premium of $15, to Mr. Benjamin P. Ware of Marblehead; and the second premium of $10, to Mr. Aaron Low, of Essex.

*Chairman*—H. G. Herrick.

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## PEARS.

The Committee on Pears award the following premiums and gratuities, viz.:

For the best twelve specimens of the following varieties, a premium of $2 each:

Bartlett, to F. Willcomb, Ipswich; Belle Lucrative, Beurre

Bosc and Dana's Hovey, to N. R. Wait, Ipswich; Onondaga (Swan's Orange), to Charles P. Barrett, Gloucester; Seckel, Horace G. Haskell, Essex; Buffum, Aaron Low, Essex; Winter Nelis, Henry Savary, Groveland; Vicar of Winkfield and Sheldon, to H. G. Sanford, Gloucester; Lawrence, Urbaniste and Golden Beurre, to Benjamin P. Ware, Marblehead; Louise Bonne de Jersey and Duchesse d'Angouleme, Wm. W. Perkins, Newbury; Beurre Clairgeau, Geo. D. Glover, Salem; Beurre d'Anjou, John W. Marshall, Rockport; Paradise d'Automne, Peter Wait, Danvers; Marie Louise, H. B. Upham, Lynn.

For the best twelve specimens of any other variety, $1, to Henry Savary of Groveland, for Flemish Beauty.

For the best collection of twenty varieties, diploma and $5, to B. P. Ware of Marblehead.

For the best ten varieties, $3, to Peter Wait of Danvers.

For the best dish of pears (not less than twenty-four specimens,) diploma and $5, to John Clark of Gloucester, for Doyenne Boussock.

Copy of Harris on Insects, to William D. Northend of Salem.

To Wm. H. Haskell of Gloucester, for a collection, a gratuity of $1.50; to Aaron Low, of Essex, gratuity, $1.50.

Warren Currier, Newburyport, $1; J. S. E. Rogers, Bennett Griffin, Albert Dodge, J. O. Procter, Barnard Stanwood, Foster F. Hobbs and Charles P. Barrett, of Gloucester, $1 each. William D. Northend, Salem, $1.50. H. B. Upham, Lynn, $1.

The past season has not been favorable to the growth and maturity of pears, and the crop throughout the County, comparing it with that of the two or three previous seasons, has been a light one; consequently the display of this fruit at our annual exhibition was not fully up to the usual standard. Nearly all the pears exhibited were from Gloucester, or vicinity, with one large collection from Marblehead, and smaller ones from Lynn, Danvers, Salem, Essex and Ipswich, a single plate from Newburyport, but not a specimen from Amesbury, Haverhill, Lawrence or Methuen.

The Hall, however, though a large one, was very well filled, and the general effect was good. We would respectfully suggest to the Committee of Arrangements that it would be easier and more satisfactory for the several committees, to have the apples, pears, peaches, grapes and flowers placed on tables by *themselves*, with each contributor's collection by itself, *until* they had been examined and the prizes awarded. It was impossible for your Committee to do justice to all, scattered as the fruit was over some half dozen long tables, and the time for examination being limited. The most noticeable pear upon the tables was the Bartlett, of which many fine specimens were presented, and which generally succeeds better than any other variety. There were also very handsome specimens of the Beurre Clairgeau, which would have done credit to any exhibition, but as this pear is so variable in quality, it should be planted with caution. The Doyenne Boussock was large and fair, and we believe this to be a good market variety.

Excellent reports and essays on pear growing have appeared in former "Transactions" of this Society, but as they have probably been forgotten (if ever read) by the present generation of fruit growers, your Committee thought it might be well to offer a somewhat extended report upon the general management of the pear, hoping it would draw attention to the subject, which we believe to be an important one. When we find, by the census returns of Massachusetts a few years ago, the apple and pear crop amounting to something over one and a half million dollars, and in a year, too, when the apple was almost an entire failure, we realize something of the importance which this crop is assuming.

We believe that pears can be grown at a much greater profit than apples, especially on our *best land*, in the immediate vicinity of our growing towns and villages; and are fully of the opinion (and that opinion has been formed from observation), that no more suitable soil is to be found in the Eastern or Middle States for successful pear growing, than is found along the coast of this state and New Hampshire. It often appears as though our sea breezes, or a taste of salt in the

subsoil, had an ameliorating effect upon the fruit. But however this may be, it is pretty certain that the trees have received more care and attention near our large cities on the coast than in the interior. The pear delights in a deep, rich soil, inclined to clay, or clayey loam ; yet we often see very good results on a light, or sandy loam soil. Some varieties, as the Buffum or Louise Bonne, do best in a light soil, while others, as the Duchesse and Beurre Diel, require a damp and rich one. Fifteen or twenty years ago, when apple orchards were in their glory, and apples were plenty and cheap, very little attention was given to pears, except near the cities. But those days have passed away, with the appearance of the canker-worm, the borer, the apple-worm and excessive droughts, and now not one apple tree is planted, where there were a hundred then. With the present prospect for apples, it may yet appear that apple trees are worth preserving. There has been of late much complaint of the so-called Dwarf pear, and probably for most purposes the standard is much the best, but at present we will confine ourselves wholly to the *standard* pear, or that worked upon the pear stock, and afterwards shall have a word to say in favor of the *dwarf*, or that worked on the quince stock.

The first thing to be considered in planting the pear, whether by the person who plants a few trees for family use, or by him who plants more largely for profit, is a suitable soil. None of our land is too good ; choose the best—such land as would raise *heavy* corn, grass or vegetables—deep loam, or better if inclined to clay. If it is so wet that water will stand upon it two or three days after the frost is out, *underdrain* it ; if it is so damp that it will not work well and *pulverize* for a week or two later still, underdrain it ; not with stones, merely covering them a foot or two, but thoroughly and sufficiently with tiles. To any one who has never tried, it is surprising to see the effect of thorough underdraining, even on any common crop ; and the cost is not so much as people would at first suppose. When land is underdrained extensively, the cost does not generally exceed $40 per acre, when the tiles are 3½ to 4 feet deep and 30 to 40 feet apart. Who that owns a garden would

not willingly pay this small amount, rather than always have his land wet and unfit for trees, or even early garden vegetables. We would not wish to infer that only land which is damp enough to need underdraining is suitable for pear trees; but the dryer the land the more will it need to be enriched.

It is important that pear trees should have *shelter*, or protection from the wind both in summer and winter. Perhaps the principal reason why they do so much better in city lots than in the country, is that they are so much better sheltered by buildings, fences, shade trees, etc. In planting pears in the open country, choose a location, if possible, where the wind is broken off on the west and north (or better on all sides) by a belt of trees, hills or buildings. When there is plenty of good land and no shelter, it would be advisable to plant belts of trees around it. Probably there is nothing better or more economical for the purpose, than a single row of Norway spruce, planted four or five feet apart around the most exposed sides. The white or Scotch pine would do very well if the land was cheap, and sometimes arbor vitæ makes a fine wind-break, but it is more apt to winterkill than either of the others. If the soil is not rich, it should be made so by heavily manuring at least a year before the trees are planted.

Many people are careful to select none but *large* trees to plant, thinking they will bear much sooner than small ones. If these could be taken up with all their roots, and quickly and carefully reset, they would, without doubt, bear in a very short time; but in the way they are generally taken up, leaving most of the roots in the ground, and planted leaving on all the top, they are apt to linger along for years (if they live at all) before recovering from the treatment. A moderate sized tree, with a *vigorous*, healthy growth and plenty of good, fibrous *roots*, will generally in five years be better than the large one, transplanted as above; but for orchard planting, or for a hundred or more trees, we would advise not to take more than two or three years from the bud, but those the *very best* selection. Trees are often much injured by exposing the roots to the sun or wind. We should remember that all their nourishment is

derived through the *small* or fibrous roots, and a few hours' exposure of these to a drying or cold wind will injure them more than a journey of weeks, when the roots are protected with damp moss or litter.

In planting, the holes should be dug deep and wide, say two or three feet deep and as many wide; the sub-soil should be thrown to one side and replaced with top soil. A little old fine manure, worked well in with the dirt in the bottom of the hole, will do no injury, but no new manure should be used around the roots. The tree should be planted as deep as it formerly stood in the nursery. Those who have only small gardens will always be well repaid for "trenching" the entire plot, 18 to 24 inches deep. In that case no deep holes to be filled up will be necessary. It is important (but often neglected) to cut smooth the end of every root before planting, for however well the trees may be taken up with the spade, the roots will be left rough and broken. In planting trees, a person should not be afraid to get upon his knees, and make good use of his hands. Every root and fibre should be carefully straightened out, and fine soil be well worked in, so that every cavity may be packed full. Here is one great secret in transplanting trees of any kind, to have the dirt come firmly in *contact with every root.* Do not, as is sometimes recommended in books, lift the tree up and down to work in the dirt, but hold it perfectly still till finished. No water need be used, unless the ground is very dry, when a pailful may be thrown upon the roots after they are covered, and the dirt drawn over that. As soon as the ground becomes dry enough around the tree, press it down *firmly* with the foot, and if the weather continues dry go over the trees again, drawing up more dirt and stamp it down as before. Very large trees may require staking to keep them in place, but for those of common size this will not be necessary.

The next operation will be "head in" the tree; cut off the superfluous limbs, and *cut back* all the remaining branches, according to their growth and the amount of roots. The tree as it stood in the nursery, as nature formed it, had roots to

correspond with the top. A large portion of these roots were necessarily left in the ground, and ought not a part of the *top* to be taken off to balance the tree? Trees with plenty of roots, that made a small growth the last season, will often do well without much heading in; but those that have grown vigorously ought to be cut back severely—better nearly all the last year's growth. This also applies to the *peach* and other fast growing trees and shrubs. When the hot, dry weather commences in summer, a heavy mulching will be found very beneficial to newly planted trees.

As to the best time for planting there is a variety of opinion—our own experience would favor early spring, just as early as the ground is dry and fine, though if the trees are *dug* early and kept back, it is just as safe in May as in April. Where the ground is not wet, *early fall* planting is generally successful, and by many preferred. The distance apart again is a subject of opinion. Our own advice would be to plant closely, from twelve to fifteen feet, though it depends considerably upon the variety; some will die out every year, and after they commence well to bear, will grow very slowly. This will give three hundred and twenty-five to the acre, and fifteen feet from each other, two hundred. When the trees are young, any low crop, like strawberries or garden vegetables, will not be objectionable, nor when they are older, if it will be borne in mind that the *surface roots* must not be cut off. A better way after five or six years is to *manure heavily* every fall, especially around the trees, and level off and work in slightly with a fork in spring; then to cultivate with a horse during the season, not working deeper than three or four inches.

After the first year the trees will need very little pruning, except to shape and keep them well balanced. Some varieties, as the *Urbaniste*, will naturally grow in a regular pyramidal shape, while others, like Rostiezer, will need considerable heading in to make them compact.

The pear, like all other trees, is subject to diseases, perhaps the worst of which are "leaf blight" and "frozen sap blight." It is a serious fault in a tree or variety to loose its leaves in

summer or early fall, while one which has healthy and *persistent* leaves is to be preferred. The curculio and other insects sometimes attack pears, but the injury is not often serious. We should encourage the *small birds* in every possible way as the best protection from insects. The canker worm, the borer, the tent caterpillar and the codlin moth, which are so destructive to the apple crop, have not as yet troubled the pear; though the "web-worm," or fall caterpillar, shows a decided preference for the pear and should always be destroyed.

Of the *profit* of pears there can be no doubt. But perhaps some will say if they are generally planted and cared for as we have described, it will not "pay"—they will become a drug in the market. Having carefully watched the market for the last ten years, we are free to say that the price of good merchantable fruit has constantly advanced. Sometimes early August pears have been a drug and have been sold at low prices, as have also the first gathered of that most plentiful of all pears, the Bartlett; but this has been owing to having "windfalls" and immature fruit forced upon the market, and that, too, in the height of the peach season. What wonder is it that people should prefer peaches to half-grown, flavorless pears? Those who have thinned out their fruit, and left it upon the trees till fully grown, towards the last of the season, have obtained good prices. Well grown Bartlett pears readily sold at four dollars per bushel in any of the cities of this county, for the last three seasons, by the middle of September, and a week or ten days later were worth six or eight dollars in Boston, though probably the average price through the season was not over three or four dollars. Could not the growing of this pear be made a *specialty* by some of our farmers in this vicinity, and would they not readily find a market by the hundred barrels, in New York, Philadelphia, Baltimore, or Portland and the cities further east? Bartlett pear trees, in ten years from planting, ought to yield a bushel to a tree, on an average, every year, taking the whole orchard through. We know of some on a small scale which have done much better than this. Any one on reflection can see the difference between this and the profits of apple orchards.

The marketing of fine fruit is quite a trade, as is also the picking and ripening, but this can be readily learned when enough is raised to make it an object.

We propose to name a few varieties, in the order of their value for market and family purposes, and first will be the *Bartlett*—of vigorous growth, adapting itself to a greater variety of soil and climate than any other, and of such wonderful productiveness that young trees often bear to a fault; of good quality, though connoisseurs speak of a disagreeable "musky flavor," still it is readily accepted by the "million," and bought in preference to the *Seckel* or *Belle Lucrative*, and is without doubt our most profitable market pear. The *Beurre d'Anjou*, coming a month or six weeks later, is very highly prized by those who know it best. A hardy and vigorous tree, a regular but not over-abundant bearer, fruit of large size, good quality, with an abundance of vinous juice. It is an October pear, but will keep well into November, and will always command a high price. Six dollars per bushel was the wholesale price offered last year by dealers around Boston. We are told of one tree in the western part of this State, the fruit of which in one year was sold for $100. The *Lawrence* is a pear, of which the more you know the better you will like it. Any one who is not pleased with a Lawrence pear in its season (November and December) is hard to suit. The tree is a very slow grower at first, but after it becomes well established, is strong and vigorous. It is, taking the county through, one of the most hardy trees known, and is becoming more popular every year. Fruit of medium size, and quite sure to ripen up yellow, and then it is sweet and delicious. The *Sheldon* is a pear of later introduction, very few trees in this vicinity are yet of bearing size, the largest one we know bears regularly as abundant crops as the Bartlett. Fruit large, russet and of the finest quality, October; tree very vigorous and hardy; same with *Doyenne Boussock*, though the fruit in quality would hardly come up to the Sheldon; still it is good, large and fair, and very profitable for the market. But this report will hardly permit of a description of the *Vicar*, *Beurre Bosc*, (one of the

*best*, but a poor grower,) *Belle Lucrative*, *Howell*, *Seckel*, *Onondaga*, *Clapp's Favorite*, *Urbaniste*, (a *splendid* pear, but tardy bearer,) *Merriam*, *Rostiezer*, *Tyson*, *Bloodgood*, and *Doyenne d'Eete*, (these last sparingly for profit,) and the *Buffum* for sandy ground when others will not succeed. These are all tried varieties, and no one will go very far astray in planting any of them, but the danger is in getting *too many* rather than too few kinds, and we should rather confine ourselves, however extensive our orchard, to about half a dozen varieties.

*Dwarf Pears*, or those budded on the quince stock, (and it should always be some strong growing variety, as the Angers or Paris,) should always be grown in the *pyramidal* or bush form, and should branch within one or two feet of the ground. It is well to plant close and not allow them to attain a large size. In selecting dwarf trees, choose those that were budded near the ground, and do not plant them too deep, just cover the bud and no more. We are aware that many successful fruit growers recommend covering the bud five or six inches in planting, but it is not our practice. If the roots grow very deep in the nursery, cut off a portion of the bottom in replanting, as no tree will flourish for any length of time with the roots deep in the wet, cold soil. The roots of all trees need the heat of the *sun*, especially for perfecting the fruit. The great advantages of dwarf pears are, the comparative earliness with which they come into bearing, the small space they occupy, and the improvement in the quality of the fruit. This last perhaps would only apply to certain varieties. But few kinds succeed well on the quince, and *only* those should be selected. The quince roots are tender and should be covered every fall; many dwarfs were killed last winter, which a good mulch around the roots would have saved. After they are large enough to bear, a wheelbarrow load or two of *manure* in autumn is a good protection, being careful that it does not afford a harbor for the mice. Do not let dwarf trees over-bear; very little fruit should be allowed to remain on for the first few years, and it is always well to thin out at least one half. Dwarf pears do best in a dark, *rich* soil, sheltered from the

winds—just such as we should suppose many of our city gardens to be, and not such as are many gardens in the country.

There is now standing in a garden in Newburyport a dwarf Duchesse tree, which in a single season produced five barrels of pears, that were sold in the city of New York at $20 per barrel.

But do not expect too much, failures will often occur. The Duchesse and Beurre d'Anjou referred to above are the exception and not the rule. And if these few hints should be of service to any fruit grower, we shall be amply repaid for offering them.

A few varieties recommended as dwarfs, in order according to their value, would be *Duchesse*, *Louise Bonne de Jersey*, *Vicar of Winkfield*, *Beurre d'Anjou*, *Belle Lucrative*, *Urbaniste* and *Rostiezer*.

*Committee*—T. C. Thurlow, D. H. Stickney, G. W. Gage.

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## APPLES.

Your Committee submit the following report on Apples:

For the best twenty varieties, Benjamin P. Ware.

" " " ten " Thomas H. Thurlow.

" " " twenty-four specimens, Aaron Low.

Mr. Low had twenty-four specimens of Roxbury Russett, that were very good for the season. He had but one other competitor for that premium.

For the best twelve specimens Hub. Nonsuch, Chas. F. Stiles, Groveland.

For the best twelve specimens Gravenstien, Chas. F. Stiles, Groveland.

For the best twelve specimens Porter, T. C. Thurlow, West Newbury.

For the best twelve specimens Pickman's Pippin, B. P. Ware, Marblehead.

For the best twelve specimens Baldwins, D. H. Stickney, Groveland.

For the best twelve specimens Roxbury Russett, T. C. Thurlow.

For the best twelve specimens Danvers W. Sweet, Edward Perkins.

For the best twelve specimens Seaver's Sweet, Peter Wait.

For the best twelve specimens R. I. Greening, T. C. Thurlow.

For the best twelve specimens Sweet Baldwin, Aaron Low.

For the best twelve specimens Minister, Peter Wait.

For the best twelve specimens Drap d'Or, Benj. P. Ware.

For the best twelve specimens Ladies Sweet, J. W. Manning.

There were a number of other very fine specimens, but the Committee had to pass them by on account of a deficiency in numbers. Some of the best in the Hall were in that condition.

*For the best twelve of other varieties.*

Buckeye Pippin, T. C. Thurlow.
Sweet Russett, Zaccheus Burnham, Gloucester.
Detroit Red, Charles Harrington.
P. Sweet, P. Wait.
Northern Spy, Charles F. Stiles.
Golden Russett, Aaron Low.
Kilham Hill, B. P. Ware.
Dodge's Sweet, D. W. Low, Gloucester.
Haskell Sweet, James F. Story, Essex.
Fall Harvey, J. L. Smart, Danvers.
Maiden's Blush, J. W. Manning.

*Gratuities of Fifty Cents Each.*

Danvers Sweet, William H. Haskell, Rockport.
Golden Russett, Daniel Wheeler.
Sweet Baldwins, Thomas Haskell, Gloucester.
Grape Apple, Thomas Haskell, Gloucester.
Hub. Nonsuch, T. C. Thurlow.
Gravenstien, D. H. Stickney.
Porter, J. L. Smart.

Minister, D. W. Low. Honey Pink, William H. Haskell.
Sweet Russett, Charles Harrington.
Roxbury Russett, D. W. Low.
Kilham Hill, William S. Friend.
Gravenstien, J. C. Calef, Gloucester.
Danvers Sweet, B. P. Ware.
Ever Keeping Sweet, B. P. Ware.
Fall Harvey, B. P. Ware.
Gustavus Sweeting, Daniel Wheeler, Rockport.
Ladies Sweet, Joseph Andrews.
Sweet Baldwin, John Clark.
Buckeye Pippin, John Clark.
Golden Russett, J. Knowlton, Hamilton.

Your Committee have tried their best to render an impartial report, and if they have failed to do justice to every exhibitor, we feel that we have done the best that could have been done with the fruit scattered over all parts of the Hall, and they make this a suggestion, that in the future the different varieties be placed together until after the committees have given them an examination; and then justice will have been given and better satisfaction all around. The Hall Committee could place the fruit where they saw fit after the examination. Hoping that this report will meet the approval of all, we remain truly yours.

*Committee*—John W. Marshall, Rockport, Henry S. Savary, Groveland.

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## PEACHES, GRAPES AND ASSORTED FRUIT.

The Committee on Peaches and Grapes hereby report premiums and gratuities as follows:

*Peaches.*

For the best Freestone white flesh, G. W. Gage, Methuen, premium, $1.

For the best yellow flesh, D. H. Stickney, Groveland, premium, $1.

For the best Essex County Seedling, B. A. Gray, Salem, premium, $1.

W. P. Rust, Gloucester, plate peaches, gratuity, 50 cents.

S. M. Burnham, " " " " 50 cents.

B. H. Smith, " " " " 50 cents.

Foster F. Hobbs, West Gloucester, one plate peaches, Crawford's Late, gratuity, 50 cents.

E. K. Lee, Essex, plate peaches, Geo. IV, gratuity, 50 cents.

*Grapes.*

F E. Oakes, Gloucester, best Concord, premium, $2.

G. W. Gage, Methuen, best Hartford Prolific, premium, $2.

B. A. Gray, Salem, best Isabella, premium, $2.

G W. Gage, Methuen, best Delaware, premium, $2.

D. H. Stickney, Groveland, best Israella, premium, $2.

G. W. Gage, Methuen, best Rogers 19, premium, $2.

For the best collection of ten varieties, not less than ten pounds, G. W. Gage, Methuen, premium, $5 and diploma.

For the best assortment of Cold House grapes, Aaron Low, Essex, first premium, $5.

George Perkins, Gloucester, second premium, $3.

Best specimen of other varieties, G. W. Gage, Methuen, plate Blood Seedling, premium, $1.

*Gratuities.*

Eben Dale, Gloucester, plate Black Hamburg, $1.

H. Tucker, plate Wild Grapes, 50 cents.

H. G. Sanford, Gloucester, plate Hartford Prolific, 50 cents.

Mrs. C. W. Dennison, Gloucester, plate Grapes, 50 cents.

John Clark, Gloucester, plate Native Grapes, 50 cents.

H. M. Brickett, West Newbury, plate Hartford Prolific, 50 cents.

Best basket of Assorted Fruit, Peter Wait, Danvers, first premium, $3.

Aaron Low, Essex, second premium, $2.

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| Total amount of premiums, - - | $34 00 | |
| " " " gratuities, - - | 6 00 | $40 00 |

All of which is respectfully submitted.

*Committee*—S. W. Hopkinson, Robert Rich, John A. Putnam.

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## FLOWERS.

There were one hundred and sixteen entries in the floral department, for which the Committee had eighteen dollars to appropriate in special premiums, and five dollars and one copy of Harris on Insects in gratuities. This small amount of money must be the excuse which the Committee reluctantly offer for passing so many beautiful bouquets and designs of both cultivated and wild flowers without a premium or gratuity. There were many varieties of foreign plants on exhibition from the dwellings and conservatories of the citizens of Gloucester, especially specimens of foreign grasses that were unique and very beautiful. There were also some very fine tube roses from Astoria, L. I. The ladies of Gloucester deserve great credit for the interest that they manifested in this exhibition of the Society, and the Committee sincerely hope that their example may be followed by the ladies in other localities where the Society may hold its annual festival. Great progress has been made during the last few years in the public taste for flowers as well as in cultivating them. The increasing interest in the floral exhibition at our Fairs gives promise of further improvement in this department. The Committee would suggest that the list of special premiums that the Society now offer for flowers, be revised or enlarged so as to include some of the

new and finer varieties to which public attention is now directed.

The awards are as follows :

Three dollars to Thomas Capers, Newburyport, for one pair Parlor Bouquets, also one dollar for Pansies.

Two dollars to Eben Dale, of Gloucester, for one pair of Hand Bouquets.

One dollar to Mrs. Edwin O. Parsons, for one Floral Design.

One dollar to Mrs G. S. Nickerson, for Floral Design.

Mrs. Charles Proctor, for dish of cut flowers, two dollars.

Mrs. D. W. Low, for Dahlias, one dollar.

Mrs. Timothy Favor, one dollar, for Petunias.

Mrs. John Norwood, for Phlox, one dollar.

Mrs. Simeon Beckford, Verbenas, one dollar.

For Wild Flowers, Clara Burnham, West Gloucester, one dollar.

For largest display, three dollars and diploma, to John S. E. Rogers, of Gloucester.

*Gratuities.*

Miss Lydia Boyd, of Essex, for bouquet and basket of flowers, one dollar.

Mrs. Simeon Trask, for Asters and Bouquets, one dollar.

Mrs. C. W. Cochrane, for Pinks and Snap Dragon, one dollar.

Peter D. Smith, Andover, Dahlias and Verbenas, one dollar.

Mrs. J. L. Shepard, Verbenas, one dollar.

Mrs. Sidney Oakes, for ten varieties of elegant flowers, one copy of Harris on Insects.

*For the Committee*—Warren Ordway.

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## VEGETABLES.

Your Committeee report that thirty-six separate lots were exhibited. They have awarded as follows :

Twelve best specimens Early Blood Turnip Beet, $2, to Gardner W. Herrick.

Twelve best Long Orange Carrot, $2, to Gardner W. Herrick.
Twelve best late Corn, $2, to Merrill Brothers.
Three best Savoy Cabbage, $2, to Merrill Brothers.
Three best Drumhead Cabbage, $2, Joseph Horton, Ipswich.
Three best large Drumhead, $2, to George L. Babson.
Twelve best large Dutch Parsnip, $2, to Merrill Brothers.
Twelve best round flat Tomato, $2, to Aaron Low.
Twelve best round Tomato, $2, to Aaron Low.
Greatest and best variety, $2, to Merrill Brothers.
Six best Mangold Wurtzel, $2, to Charles Bennett.
Twelve best Purple Top Turnip, $2, to E. K. Lee.
Three best Marrow Squash, $2, to Merrill Brothers.
Three best Turban, $2, to Benjamin P. Ware.
Three best Hubbard, $2, to Benjamin P. Ware.
Best peck Danvers Onion, $2, to Gardner Herrick.
Best peck Flat Onion, $2, to Merrill Brothers.
Best peck Red Onion, $2, to Merrill Brothers.
Best peck Early Rose Potatoes, $2, to W. J. Dale.
Collection of Garden Seed, $8, to Aaron Low.
Large, varied and excellent show of Vegetables, Merrill Brothers, a copy of Harris on Insects.

*Gratuities.*

Best dish Trophy Tomatoes, $2, to Peter Smith.
Specimen of Wheat, home grown, $2, Thomas Haskell.
Mammoth Sweet Corn, $1, to George Burnham.
Red Drumhead Cabbage, $1, to Merrill Brothers.
Trace of Field Corn, $2, W. J. Dale.
Peck of Peerless Potatoes, $2, to Merrill Brothers.
Fine Crookneck Squashes, $2, to Charles E. Grover.
Trace of Field Corn, $1, to E. K. Lee.
Choice Melons, $2, to John L. Rogers.
Cranberries, $1, to A. C. Estes.
Russian Sunflower, $1, W. H. Haskell.
Celery, $2, to John S. E. Rogers.
Squashes, $1, Mrs. Eliza Herrick.

Peppers, $1, Merrill Brothers; Potato Onions, $1, Merrill Brothers.

Sandy Lake Potato, $1, George L. Nickerson.

Fine Cabbages, $2, B. Stanwood.

Fine Fottler Cabbages, $2, to Albert Dodge.

Sweet Potatoes, $1, James F. Storey.

James J. H. Gregory—*Chairman of the Committee.*

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## COUNTERPANES AND RUGS.

The Committee on the award of premiums and gratuities in the above department would report a very large and excellent display of both Counterpanes and Rugs, and in their opinion one of the most extensive offered at a County Fair. The Committee beg leave to submit the following report, as the result of their labor in the award of premiums.

First premium for Counterpanes is awarded to No. 21, Mrs. Horatio G. Sanford, Gloucester, for Silk Counterpane, $4.

Second premium to No. 1, Mrs. Isabel Elwell, Gloucester, Patch Work Counterpane (6214 pieces,) $2.

Gratuities were awarded for Counterpanes as follows:

No. 14. Mrs. Betsey Davis, Gloucester, silk counterpane, $1 00
No. 20. Mrs. Eliza P. Bulkley, Gloucester, - - 50
No. 91. Mrs. John Woodbury, Gloucester, - 50
No. 41. Mrs. Clara Presson, Gloucester, 3 white knit quilts, 50
No. 42. Mrs. Mary E. Hinckley, Gloucester, - - 50
No. 12. Mrs. Eliza B. Loring, Gloucester, - - 50
No. 13. Mrs. Lucinda Procter, Gloucester, - - 50
No. 35. Mrs. Mary Gaffney, Gloucester, - - 50
No. 11. Mrs. Hannah P. Jones, Gloucester, - - 50
No. 53. Miss Lizzie Griffin, Riverdale, - - 50
No. 79. Miss Elizabeth E. Coggswell, West Gloucester, a young lady fourteen years of age, - - 50

No. 28. Mrs. Joseph O. Procter, Gloucester, - .50
No. 34. Mrs. E. B. Center, Gloucester - - - 50

The first premium for Rugs is awarded to No. 18, Mrs. John G. Bennett, Gloucester, $3.

Second premium is awarded to No. 78, Mrs. M. L. Hale Smith, Pigeon Cove, $2.

Gratuities were awarded for Rugs as follows:

No. 3. Mrs. B. M. Smith, Salem, 4 rugs, - - $1 00
No. 4. Mrs. F. H. Turner, Gloucester, - - 1 00
No. 9. Mrs. Ann C. Ingersoll, Gloucester, 5 rugs, - 1 00
No. 32. Mrs. M. L. Sewall, Rockport, - - 1 00
No. 80. Mrs. C. Marston, Jr., East Gloucester, - 1 00
No. 5. Mrs. Mary A. Colby, Annisquam, - - 50
No. 15. Mrs. George W. Noyes, Newburyport, - 50
No. 19. Mrs. George D. Gardner, Gloucester, - 50
No. 24. Mrs. Timothy Favor, Gloucester, - - 50
No. 25. Mrs. Martha Shepard, Gloucester, - - 50
No. 35. Mrs Mary Gaffney, Gloucester, - - 50
No. 44. Mrs. Addison Merchant, Gloucester, (Mosaic) 50
No. 45. Mrs. Luther Allen, Manchester, - - 50
No. 63. Mrs. F. H. Bryant, Gloucester, - - 50
No. 67 and 69. Mrs. Thomas Putnam, Danvers, (2 rugs) 50
No. 77. Mrs. Mehitable Woodbury, Pigeon Cove, (80 yrs.) 50
No. 81. Mrs. M. E. Procter, Gloucester, - - 50
No. 84. Mrs. M. I. Lowe, Rockport, - - - 50
No. 85. Mrs. L. Reed, Gloucester, - - - 50
No. 90. Mrs. Charles Story, East Gloucester, - - 50

Gratuities were awarded for Braided Mats as follows:

No. 17. Mrs. Harriet M. Oakes, E. Gloucester, (75 yrs.) $1 00
No. 36. Mrs. Addison Merchant, Gloucester, - 1 00
No. 39. Mrs. H. F. Bray, Gloucester, - - - 1 00
No. 73. Mrs. E. W. Wonson, Gloucester, - - 1 00
No. 70. Mrs. L. Allen, Manchester, - - - 50
No. 86. Mrs. Anna E. Wonson, East Gloucester, - 50

In closing our report, we would say that there were very

many other beautiful counterpanes and rugs that the Committee would like to have awarded gratuities, but owing to the extensive display of both, the funds allowed this department would not admit of further distribution.

*Committee*—Charles Babson, Jr., A. W. Warren, Mrs. E. K. Lee, Mrs. Bennett Griffin, Mrs. Warren Currier.

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## ARTICLES MANUFACTURED FROM LEATHER.

Your Committee were disappointed in not seeing on exhibition a larger number of articles manufactured from Leather. As this is one of the largest if not *the* largest interest in the County, does the Society offer sufficient inducement in premiums to bring out a good competition ? Your Committee would say, however, that the articles placed on exhibition were very good.

The case of samples of Ladies' Shoes offered by Messrs. Clark & Foss, of Haverhill, are deserving of special notice. We think for workmanship and style they compare well with the best manufactures of Philadelphia, or the famous Burt of New York, and that they are deserving of much credit for their enterprise in establishing in our midst that branch of manufacture.

We award them a gratuity of $10.

The sample pair of Fishing Boots offered by Nathaniel R. Wait, of Ipswich, were very good, being made from a new pattern with no seam on the inside to hurt the foot, which is a great improvement.

To him we award a gratuity of $5.

The Harness offered by H. S. McCullock, of Gloucester, was thoroughly made from good stock and will do good service.

To him we award a gratuity of $5.

We also award to C. C. Cressey, of Gloucester, for Carriage Mats, 50 cents. Also for Sleigh Shoes, 50 cents.

*Committee*—Rufus H. Brown, A. D. Wait, N. E. Ladd, George Tapley.

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## MANUFACTURES AND GENERAL MERCHANDISE.

Essex Agricultural Society:

Your Committee on "Manufactures and General Merchandise" respectfully submit the following report:

*Premiums.*

No. 26. For the best display of Bonnets, S. H. Emanuel & Co., Gloucester, - - - $4 00

*Gratuities.*

No. 1. Oil Clothing, Pew & Davis, Gloucester, - 2 00
No. 2. Toilet and Chemical Preparations, M. L. Wetherell, Gloucester, - - - - 2 00
No. 3. Bar Soap, A. Merchant & Son, Gloucester, 1 00
No. 6. Prepared Fish. George H. Smith, Gloucester, 1 00
No. 17. Baby Tender, H. S. Cates, Haverhill, - 1 00
No. 19. Burglar-proof Window Lock, H. B. Upham, Lynn, - - - - - 1 00
No. 24. Duck Preserver, C. Nelson, Gloucester, - 1 00
No. 25. Copper Paint, Tarr & Wonson, Gloucester, - 2 00
No. 27. Excelsior Copper Paint, Gloucester Copper Paint Co., Gloucester, - - - 2 00
No. 28. Bracket and Stereoscopic Stand, Geo. H. Dow, Gloucester, - - - - - 2 00
No. 29. Waterproof Cloak, N. Babson & Co., Gloucester 1 00

*Committee*—Alexander Pattillo, William O. Ward, Allan Rogers.

## FANCY WORK.

Premiums awarded by the Committee on Fancy Articles:

The first premium of $3, for work performed by a child under twelve years of age, was awarded to Miss Ursula A. Bryant of Gloucester, for fancy needle work.

To Procter Brothers of Gloucester, Photograph Views, $1.

To Miss Lucretia Allen of Danvers, a blind girl, for fancy bead work, a gratuity of $2.

To Miss Abby K. Williams of Gloucester, for three Worsted Pictures, a gratuity of $1.

To Miss Ella W. Fiske of Salem, for Embroidery, $1.

To Miss Florence F. Sanford of Gloucester, for Sofa Tidy and Cushion, $1.

To H. Mackey Coffin of Gloucester, Towel Rack and fancy Brackets, $1.

To Miss Mary Douglass of Gloucester, Embroidered Undergarments, $1.

To Mary Scripture of Rockport, for Embroidery, a gratuity of $1.

To Mary Prindall of Gloucester, Knit Stockings and Lace Fayal work, $1.

To Hattie C. Babson, of Gloucester, Afghan, $1.

To Margaret Wardwell of Methuen, Table Cover, $1.

To Sarah E. Wetherell of Gloucester, Lamp Mat, $1.

To Charles H. Dow of Gloucester, Stereoscopic View Stand and Bracket, $1.

To Chas. Bailey of Manchester, Toilet and other Brackets, $1.

To Daniel Wheeler of Rockport, one Block of Polished Porphyry, $1.

To Mrs. Cyrus Story of Gloucester, Wax Work, $1.

To Anna E. Hildreth of Peabody, Wax Cross, $1.

To Sarah B. Saville, Gloucester, Picture in Water Colors, $1.

To Ann T. Grover, " " " " $1.

To Abbie L. Davis of Gloucester, Book of Pressed Sea Mosses, $1.

To Lizzie Seaver of Gloucester, three Pictures, $1.

To Eliza R. Ames of Rockport, Embroidered Shams, $1.

To Mary W. Bayley of Newburyport, Embroidered Underclothes. $1.

To Maria L. Rogers of Gloucester, Worsted Cushion and Mat, $1.

To Daniel Poland, Jr., of Gloucester, Vessel Models, $1.

To Judith Caswell of Gloucester, Tidy, $1.

To Mrs. H. G. Sanford of Gloucester, Tidy, $1.

To Charles P. Ross of Gloucester, two Cut Wood Picture Frames, $1.

To Lydia E. Dench of Gloucester, one Cut Wood Frame, $1.

To Mary L. Bray of Gloucester, Worked Chair Seat, $1.

To Lucy W. Davis, Gloucester, Tatting Collar, &c., 50 cents.

To Hattie M. Fears of Gloucester, two Tidies, 50 cents.

To Catalina Davis of Gloucester, Pin Cushion, 50 cents.

To Susan A. Higgins of Gloucester, Baby's Skirt, 50 cents.

To Mrs. John S. Carter of Gloucester, Watch Case and Tidy, 50 cents.

To Susie F. Small of Gloucester, Worked Skirts, 50 cents.

To Mrs. O. A. Small of Gloucester, Worked Handkerchief, 50 cents.

To Clara D. Burnham of W. Gloucester, Toilet Set, 50 cents.

To Josephine Woodbury of Gloucester, Cushion and Tidy, 50 cents.

To Rachel Webber of Gloucester, Tatting Collar, 50 cents.

To Ada C. Davis of Gloucester, Bead Cushion, 50 cents.

To Anna Niles of Gloucester, Towel Rack, &c., 50 cents.

To Helen Hare of Rockport, Lace Handkerchief, 50 cents.

To Mrs John Norwood of Rockport, Cone Wall Pockets, 50 cents.

To J. E. Giles of Rockport, a Bottle of Balm, 50 cents.

To G. F. Griffin of Annisquam, Frame of Shells and Sand, 50 cents.

To Misses Abbie L. Davis and Maria H. Bray of Gloucester, box Marine Specimens, 50 cents.

To Miss Mary E. Tarr of Rockport, Worsted Work, 50 cents.

To Mrs. Epes W. Merchant of Gloucester, Worsted Picture, 50 cents.

To Maria H. Bray of Gloucester, Sea Mosses, 50 cents.

To J. J. Babson, Jr., of Gloucester, Carved Napkin Ring, 50 cents.

To Mrs. Joseph Friend of Gloucester, Sea Mosses, 50 cents.

To Eliza Stickney of Gloucester, Pressed Autumn Leaves, 50 cents.

To Adelia F. Tomlinson of Gloucester, Picture, 50 cents.

To Martha A. Wonson of Gloucester, Picture, 50 cents.

To Mary S. Stacey of Gloucester, Picture Frames, 50 cents.

To Ella Proctor of Gloucester, Picture, 50 cents.

To Eliza G. Davis of Gloucester, Globe of Wax Flowers, 50 cents.

To Mrs. John J. Somes of Gloucester, Toilet Set, 50 cents.

To Miss Jeannie Holman, Tidy and Bag, 50 cents.

To Mrs. Mary Gilbert, Carriage Blanket, 50 cents.

To M. L. Hadley of Gloucester, Toilet Set, 50 cents.

To Susie F. Andrews of Essex, two Tidies, 50 cents.

To Ida M. Proctor of W. Gloucester, Pin Cushion, 50 cents.

To Mary Day of Rockport, Tidy, 50 cents.

To Nellie Griffin of Gloucester, Card Paper Box, 50 cents.

To Mrs. F. F. Emerson of Gloucester, Pansy Mat, 50 cents.

To Mary Ganey of Gloucester, Fancy White Skirt, 50 cents.

To Mrs. Judith Caswell of Gloucester, Tidy, 50 cents.

To Mrs D. B. Friend of Gloucester, Worsted Mat, 50 cents.

*Committee*—Mrs. E. G. Berry, Mrs H. G. Sanford, Mrs. Charles E. Grover, Andrew Nichols.

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## FARMS.

The Committee on Farms would respectfully report:

The difficulty which has long existed in this County with regard to the entry of Farms for premium still continues. It may be truly said that no competition has yet been established between the cultivators of our soil on the question of general

farm management, and the best method of arranging a farm with reference to economy and profit. There may be many causes for this; and the members of the Society may be deterred from a strife for one of our most liberal and significant premiums by the trouble and care and time which it involves. Still the fact exists, and we are under special obligations, therefore, to the one exhibitor of this year, Mr. Francis H. Appleton of West Peabody, who has conferred a great favor on the farming community and this Society by a careful, elaborate and interesting statement with regard to his own farm, and whose courtesy and hospitality will long be remembered by those of the Committee who enjoyed it.

MR. FRANCIS H. APPLETON'S STATEMENT.

My farm consists of one hundred and sixty-two acres, forty-four acres being cultivatable, and the remainder wood, pasture, marsh and waste land, which latter includes the land on which my buildings, etc., stand.

The larger part of it, including all the land which I call cultivatable, I bought March 17, 1869; the remaining part I have purchased within the past year.

When I bought the farm, the forty-four acres, which I mentioned, were in an almost worthless condition for farming purposes; twenty-nine acres of it were mostly covered with tough moss and old corn-hills, with a growth of young pine starting upon it, and useless, broken-down stone walls crossing it, many of which have been removed; the greater part of these twenty-nine acres had not been plowed for upwards of seventy years; the remaining fifteen acres had, here and there, old oak stumps and the like, from each of which a thriving growth of bushes was springing up, also numerous heaps of stones scattered about, and a portion of it was dotted over with the stumps of cherry trees, and crossed by tumbling down old fences. The first year after taking possession, I left the better looking portion of these fifteen acres to cut for hay, and plowed up and planted as much of the remainder as I thought I could manure.

This first year I planted two acres of roots, one of oats to cut green, a little corn fodder and half an acre of kitchen garden, and could secure only a scanty amount of manure for them, and harvested five tons of hay, mostly composed of white-weed. This was the yield of the farm in 1869.

This present year, the same forty-four acres of cultivatable land has yielded as follows:—

One-fourth acre Ruta Bagas yielded 2 tons, 75 pounds.

One-fourth acre Mangolds yielded 10 tons, 1581 pounds.

Three-fourths acre Carrots yielded 9 tons, 1635 pounds; estimated forty per cent. rotten.

Two acres Winter Rye for fodder, mostly cut green, yielded also 1300 pounds straw, and 8 bushels, 47 pounds rye.

One and one-fourth acres Corn fodder, cut one acre green, and cured 3 tons, 340 pounds (dried.)

One acre Onions yielded 243 bushels marketable, 18 bushels small; and where onions were killed sowed Ruta Bagas, which yielded 2 tons, 1086 pounds; estimated that five per cent. onions were rotten and a large per cent. killed by hail and cut-worm.

Four and one-fourth acres Potatoes yielded 617 bushels; estimated thirty-three per cent. rotten.

One-half acre kitchen garden; a late crop of 1½ tons small turnips.

One-fourth acre, nursery of a variety of young trees imported from England.

Six and one-half acres mossy field, not yet plowed, but to be turned up this Autumn.

One-fourth acre occupied by stone walls.

One acre Hungarian grass yielded 3 tons.

Twenty-five and three-fourths acres grass land yielded 49 tons, 1320 pounds, much of which had been scantily manured and seeded with white clover and red-top, intending it for pasture, but all of which had been seeded down by myself.

There are also a few apple trees in good bearing condition about the buildings, and I have also set out some young trees in the same locality. A number of ornamental trees have also been set out.

The land where Mangolds, Carrots and Onions were sown was in each case divided into quarters and fertilized with the following chemicals in addition to barnyard manure, but either the remarkable season, the rot or the cut-worm have prevented my experiment from being useful, and I only give the chemicals applied:—one-fourth without any fertilizer, one-fourth with one hundred pounds Phosphatic Blood Guano, one-fourth with one hundred pounds Muriate of Potash, one-fourth with one hundred pounds Phosphatic Blood Guano and one hundred pounds Muriate of Potash.

A part of my Potato piece, being exhausted land plowed last Autumn for the first time for many years, I dressed as follows:—Spread at the rate of five casks of lime per acre in the Autumn, and in the Spring four hundred pounds Phosphatic Blood Guano, three hundred pounds Muriate of Potash and two hundred pounds Nitrate of Soda. I have not the figures at hand to tell the exact amount of land thus treated, but it is sufficient to say that I also measured another portion of land of the same character, which was manured with barnyard manure in the hill, and ascertained the amount of the crop on each piece. The land with chemical manure yielded thirty-five bushels. The land with barnyard manure yielded ninety-seven bushels. The potatoes were much injured by rot, estimated loss being thirty-three per cent.

The fodder-corn was sown on exhausted grass land, quite gravelly, and manured in the hill with barnyard manure. Some of it reached a height of eleven feet in nine weeks from the time of seeding.

The Carrot crop should be spoken of. Your Committee will remember the fine appearance of my carrots when they saw them. Not long after that time a blight struck the tops and blackened many of them, and later in examining the roots, I found them rotting fast, and that in places only the hole where the carrot had grown and rotted entirely away, could be found. In plowing the ground after the crop had been removed, it was surprising, also, to see how many rotting roots were necessarily left in the ground. I judge forty per cent. to be a fair estimate of the loss.

The Onion crop, which looked finely early in the season and which had been greatly injured by the cut-worm, was slightly injured by the rot shortly before being pulled and also somewhat after pulling. Where the cut-worm destroyed the onions, Ruta Bagas were planted.

The one hundred and eighteen acres of wood, marsh, pasture and waste land are capable of much improvement, which can be brought about by light expense, with time and patience to help me.

I am at present making considerable improvement on the highway which runs through the farm, by grading and filling and building new walls, which will advance the appearance and usefulness of the road. The majority of my farm fences are of the ordinary kinds; but I have found a thousand or more feet of portable wooden fence very useful.

The only sound building that I found upon the farm was the house, the other buildings being very dilapidated. Some of these have been repaired, others have been torn down, and some new buildings have been erected. A dilapidated barn, fifty-five feet long by thirty-seven feet wide, I have entirely renovated, clapboarded and shingled, and have lengthened by an addition to its front, thirty feet long and forty-three feet wide, so that it covers two commodious horse-stalls, one large box-stall, twelve tie-ups for cows, one bull-pen, ample carriage room, a boiler and grain room, hayscales immediately inside of large barn-door, and storage room for about forty tons of hay. This year, by filling up much of the driveway from the floor to near the gable, I have made more storage room. I shall probably lengthen my barn forty-five feet during the coming half-year. My buildings are painted, except the hospital and henery, which are washed with a color to correspond. All the buildings have been built simply, but strongly, with reference to use and with no other ornamentation than to give their exterior a neat and tasteful appearance, without incurring unnecessary expense; and many of them have been built by myself.

The approaches to my buildings and to my barnyard have

been much improved by grading and filling, but it is impossible to describe in a short space, on paper, how poor a condition I found them in.

My Ayrshire Herd consists of an imported bull, three cows, two heifers and two bull-calves. I have taken great care in selecting those of my animals that I have not raised.

They are only those who either have been imported, those whose immediate ancestors have been imported, or whose ancestors' pedigrees can be traced back to their progenitors in Scotland. My Ayrshires are mostly young stock, and include an imported bull, and a heifer, Lady Essex, 1413, which has just dropped a fine bull-calf, and which is a promising milker. I have also five grade cows, four of which I bought last Spring.

Having kept an accurate account of the doings of my cows, I can give the following statement of their yield in pounds, etc.

The age given is taken on July 1st, 1872; the weights are those recorded March 23d, 1872; and the number of days in milk are comprised between August 26th, 1871, and August 25th, 1872, inclusive.

| Name. | Age. | Weight of cow. | No. days in milk. | Weight of milk. |
|---|---|---|---|---|
| Maud, 604. | 8 | 1268 lbs. | 320 | 8159¾ lbs. |
| Lily Dale, 1475. | 4 | 975 lbs. | 283 | 7728¾ lbs. |
| Lassie, 1442. | 4 | 1151 lbs. | 290 | 5277¼ lbs. |

My milk is at present all sold to a milkman at the barn.

I have five half-Chester and half-Suffolk pigs, three months old when your Committee saw them, bred by Henry Saltonstall, Esq., West Peabody, Mass.; also two farm horses.

My implements are, at present, a No. 4 Clipper Mower, a Bullard Hay Tedder, and other necessary haying implements; a Holbrook's two-horse swivel, which does almost all my work, an Eagle 20, and other plows; a Hinge harrow, Shares', Thomas' smoothing, and the ordinary brush harrow; a large, two-horse, cast-iron roller, made in sections; and other necessary wagons, tools, etc.

I have also a collection of carpenter's tools, which have enabled me to erect several necessary buildings upon the farm. I propose to build the addition of forty-five feet in length in

the rear of my barn during the coming Winter, and do as much of it as possible upon the farm.

Since writing the foregoing, after having visited many of the most noted Ayrshire herds, I bought two heifers in milk, whose blood seemed to be most remarkable for its milking properties.

The Committee award to Mr Appleton, for his Farm in West Peabody, the first premium of Thirty Dollars and diploma.

*Committee*—Geo. B. Loring, Chairman ; Chas. P. Preston, Benjamin P. Ware, J. D. W. French, Alonzo B. Fellows, David W. Low.

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## MANURES.

Your Committee regret that no entries have been made for the premiums offered by the Society, for the best conducted experiment in the preparation and application of manures, whether animal, vegetable, or mineral ; a subject of so much interest and importance to the farmer, a subject upon which so much has been written, and yet one upon which so little positive knowledge has been obtained, one where agricultural writers and theorists, doctors and chemists, manufacturers of fertilizing nostrums and their advertising agents, farmers and market gardeners, are agreed upon no two particulars concerning their management and application.

It requires no little courage for any one to enter the arena, either as a competitor for a premium or to add to the voluminous writings already before the public, lest one should make the present confusion more confounding.

An eminent agricultural writer and theorist advocates the importance of using all manure green from the barnyard and plowing directly in, lest it should lose some of its fertilizing qualities by evaporation or fermentation. When immediately, a dozen others take up the refrain and continue it to the echo,

until any one reading our agricultural periodicals would be led to believe that any other use of manure would be entirely destructive to the interests of the farmer, while the most progressive farmers and market gardeners are ready to declare that such manure is unfit for present use, for the growing of the roots and vegetables most valuable in the market. Another portion, equally sanguine, advocate the importance of plowing in manure full ten inches deep, lest some of its good qualities should escape in the air, while the most carefully conducted experiments on record prove the greatest value is obtained by placing it near the surface.

Some of the most eminent agricultural chemists of this country and of Europe seem to prove by experiment, and do assert, that worn-out lands may be reclaimed to fertility, at small cost, by the use of chemicals alone: and that all the fertilizing value of a large load of barnyard manure may be chemically represented by a basket of various salts obtainable at the druggists, that may be easily carried upon one's shoulder. And yet your Committee observed the effects of a formula, prescribed by Dr. J. R. Nichols, on a part of a field of potatoes, in comparison with another part manured with barn manure, resulting very much in favor of the barn manure, (for the particulars we refer to the report of the Committee on Farms, published in the transactions of the Society this year.)

And to read many of the circulars of manufacturers of special and general fertilizers, backed up as they are by recommendations, evidently obtained by friendly or mercenary inducements, is sufficient, in many cases, to make the more credulous part with their hard earnings, to secure what appears to them the panacea for impoverished fields and short crops, usually ending in disappointment.

Now, midst all this confliction of opinions and interests, what is the farmer to do, who is anxious to improve his farm, his crops, and his purse? Your Committee would answer by some suggestions, based upon many years' experience and observation. It is evident that the main dependence of the farmer must be upon the deposits of the barnyard and cellar, and a judicious system of composting.

The importance of getting all he can and saving all he gets, to be used in the most economical and judicious way, cannot be too strongly urged. All animal and vegetable substances are valuable and should be carefully gathered and added to the compost heap. Meadow muck and some kinds of salt marsh should be dug in dry seasons, in quantities to last for several years, for the longer it has been dug the more valuable it becomes

The barn cellar and yard, together with the hog's pen, should be sufficiently supplied to absorb and hold the urine from the cattle and no more. The process of composting can be more profitably conducted in the field where it is to be used, than in the cellar or yard, as the treading of cattle interferes with the process of fermentation in a compost heap, and requiring less labor to manipulate when in the field.

Your Committee are aware of the preponderance of authority for keeping all manures under cover away from the air, sun, rain and snow, but we venture the assertion that a compost heap, made up of suitable materials and properly prepared, gains more than it loses by exposure to those influences.

It is better that a compost heap should be made up in the fall, at least four feet high, and the larger the better, in a compact form, either round or square, always commencing with a layer of muck or soil, then of stable manure, sea-kelp or some substance that will produce fermentation, such as fish offal, or fish pumace, then another layer of muck; any refuse vegetable substance may be added with the muck, in alternate layers with the manure, until the heap is completed. The top layer should be of muck. The manure in the heap should be in proportion of one-third, or half, to the whole, according to the strength of it. Such a heap will soon be in a state of fermentation, and (like the little leaven hidden in a measure of meal,) will continue its work through the winter, until the whole mass becomes manure of equal value with the portion of stable manure first applied.

This heap would be in suitable condition to be forked over in March, and at intervals of two weeks for the second or third

time, each forking over producing new fermentation, thereby adding in value to the quality. The importance of frequent forking over a compost heap is often overlooked. It is believed that no labor performed on a farm pays better than this, and none oftener neglected.

The henery, privy and sinkspout should all be abundantly supplied with dry earth, or meadow muck, each having proved to be perfect deodorizers, and much valuable manure may thus be obtained.

Those farmers who are located on the borders of the ocean may derive great benefit from its resources. Kelp, rockweed, the various mosses growing in the ocean, are all powerful fertilizers, whose value may be doubled by composting as described above.

Night-soil from our larger towns and cities, that are so abundantly supplied with running water, is generally so diluted that the teaming of it is now of doubtful expediency. However much the sanitary condition of a city and its luxury may be increased by the introduction of water and its consequent sewerage, an immense waste of fertilizing material is caused, which must eventually lessen the products of the country to an amount incalculable.

After the farmer has carefully husbanded his resources for manure and would still add to his stock of fertilizers, the refuse of glue factories, morocco dressing establishments and lead factories may be bought at prices that can be afforded, besides stable and hog manure, when competition does not run too high. Wet or damaged salt, as a special manure for certain crops, will sometimes double the product at very small cost. Peruvian guano, at its present price, may probably be used at greater profit than any other of the commercial fertilizers.

Bones, when reduced by the farmer himself, are valuable and may doubtless be used with profit, but no farmer can afford to pay thirty or forty dollars per ton above the cost of the bones, for grinding or reducing them to phosphate of lime, and run the risk of adulteration. Your Committee would especially caution their brother farmers against the purchase of the numberless so

called phosphates, that are thrown upon the market, or of guanoes, whose only real recommendation is that they contain *some* Peruvian guano, or of the special fertilizers so persistently urged upon the farmer, except by using the greatest care to guard against deception.

*For the Committee*—Benjamin P. Ware.

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## FATTENING CATTLE AND SWINE.

The attention of your Committee has not been called to any experiment upon the subject entrusted to their care, but as Chairman of the Committee I would call attention to a few facts, which would tend to the advancement of this branch of Agriculture, especially in our Eastern States

Should accurate, detailed accounts of the exact cost of fattening animals be kept, then, with a positive knowledge of expenses as a basis, we could ascertain exactly how much per pound we had gained or lost, and thus determine the advisability of continuing this branch of business.

Such accounts as I suggest, with an accompanying statement of how much corn, etc., was required to make a pound of beef, mutton, etc., as the case might be, would enable the agriculturist to ascertain whether he can afford to fatten animals to a profit, provided that he has a knowledge of the market prices of corn, etc., and of beef, mutton, etc.

And with the knowledge of the constituent parts of corn, etc., which can be obtained from the proper books, it is possible, knowing the constituent parts of other articles of food and their cost, to substitute other food for the corn, etc., that will be cheaper and of fully equal fattening properties.

The small farmer cannot always keep as *detailed* accounts as would be necessary to carry out my suggestions, but those who fatten a large number of animals might do so and enter their results in competition for the premiums offered by our County

Society, and they could thus be brought before the public in our Society's yearly printed transactions. Thus they would be assisting in the general advancement of this subject.

Probably such accounts are at present kept, and, if they are, I would urge that they be entered in competition for the premiums offered by our Society for Farm Accounts.

Carefully kept accounts must be the basis of all improvement and future prosperity in farming, especially in the New England States.

*Chairman*—Francis H. Appleton.

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## ROOT CROPS.

In looking at the premiums offered by the Society, we notice first that offered for Sugar Beets. From some cause this crop does not attract so much attention as it did a few years ago. No entry was made for this premium.

Next is Carrots; although many of these are grown in some parts of the County, no one has made any entry. The season has not been very favorable for this crop, the heavy rains in the early part of the summer made it difficult to subdue the weeds.

The next is Parsnips, but comparatively few of these are raised in this County. We have not seen a piece that contained an half acre. This is a valuable crop, either for stock or the table, but as the seed is so long germinating, it requires much care to prevent the weeds from getting the mastery, and it is more expensive digging than the other roots.

The next is for Rutabaga Turnips. We had one entry for this premium, that by Dudley H. Porter of Hamilton. The piece contained nearly one acre. The Committee measured off an half acre. The crop, as will be seen by the statement, was a small one to recommend a premium for, but various considerations led us to this conclusion.

First, it was the best crop brought to our notice : to those farmers that may say we had a better crop, we will say that we should have been very happy to have seen it, and hope that next year they will invite the Committee to view a much larger one. Again, we think it may be well for the Society occasionally to pay a premium for a crop that is not large, to encourage those that have a good crop to compete for the premium and to show by contrast the different results between liberal manuring and meagre.

Again, we sometimes hear the remark, that none but rich men or *fancy farmers* can get a premium from the Essex Agricultural Society. However groundless this may be, the Committee wish to do what they can to show that it is not true. Again, a crop that may appear small to some of the high cultivators of Peabody and Marblehead, may appear large to some in other parts of the County.

We recommend the Society premium of a diploma and $10.

There were two entries for Mangold Wurtzels ; one by J. D. W. French, North Andover, the other by Benjamin P. Ware of Marblehead. It was difficult for the Committee to decide which was the best conducted experiment. It will be seen by the statements that Mr. French had his rows six inches farther apart than Mr. Ware, which enabled him to use the horse cultivator between the rows. Mr. Ware does not tell us what price he put for a day's labor ; Mr. French based his estimate upon two dollars per day. Both pieces of land had been underdrained and were similar in character. The land in both cases was measured by the Committee. The Mangolds upon each piece were uniform in size and very handsome. The one uses stable manure composted with meadow mud ; the other, *sea manure* composted with mud. It will be seen by the estimate that they make a wide difference in the value, Mr. French putting them at $8.33 per ton, Mr. Ware at $13 per ton. It is a trite saying that any article is worth what it will bring in market. In a qualified sense this is true, but unlike hay and grain, roots can not be kept but a short time ; a few tons may be sold for $15 per ton, yet the whole may not be safely estimated at that price.

The true question is, what are they worth to the farmer, compared with hay and grain to feed to his stock? We will venture to give our own opinion that one ton of shorts is equal to four tons of Mangolds, and that fifty pounds of Indian meal are equal to three hundred pounds of Mangolds for feeding to milch cows.

Although we are strongly inclined to recommend planting Mangolds far enough apart to use the horse cultivator between the rows, yet as Mr. Ware has produced a larger crop by his method, we recommend giving him the premium of $10 and diploma, and we would recommend a gratuity of $8 to J. D. W. French of North Andover.

There was no claimant for the premium on Onions. When we think of the fact that a large part of the onions consumed in New England are grown in this County, we should expect that there would have been many competitors.

*Potatoes.*

Most of us have hitherto had the impression that a wet season was favorable for the growth of the potato; but many of us now realize that an abundance of rain does not always produce a good crop. Many pieces had a luxuriant growth of vines and excited the hope of a large crop, but we were disappointed. No one asked the Committee to look at their potatoes.

*Cabbages.*

The Committee recommend awarding the Society premium, $10 and diploma, to J. J. H. Gregory of Marblehead, for crop of Cabbages.

*Squashes.*

The only entry for this premium was by J. J. H. Gregory of Marblehead. We recommend to him the diploma and premium of $10.

The premium for Summer English Turnips Mr. Stiles did not ask for.

It will be seen that only for four out of the ten premiums has there been any competitors.

*Committee*—William R. Putnam, William B. Morgan, James P. King.

## STATEMENT OF BENJAMIN P. WARE.

### STATEMENT CONCERNING A CROP OF MANGOLD WURTZELS RAISED BY BENJAMIN P. WARE OF MARBLEHEAD, NOV., 1872.

In the fall of 1870, the half acre of land, upon which this crop grew, was broken up, having been in grass for six years, and in 1871, four cords of compost manure was applied and potatoes planted. This land was formerly very wet, having since been drained by a box drain running through it, two feet below the surface, it has become fit for cultivation. The soil is dark and heavy, resting upon a hard, gravelly sub-soil. A compost heap was made up upon the land last fall by first a layer of peat muck, one foot deep, then sea-kelp green from the beach, same depth, then a layer of muck and another of kelp. In the spring, as soon as the frost would permit, the whole was forked over three times, at intervals of a week or ten days, by which it was completely mixed and pulverized. This, to the amount of six cords, was spread on and plowed in eight inches deep, and harrowed. After a week it was plowed again the same depth, which brought the manure to the surface, then the pulverizing harrow was used until the manure was very thoroughly commingled with the soil; after which, the surface was dragged smooth, making as perfect a seed bed as could be desired.

On the 12th of May, two pounds of seed, of the Norbiton variety, were sown in drills, two feet apart. Just before the seed came up, salt was spread broadcast on two-thirds of the piece, at the rate of twenty-five bushels per acre. The crop was hoed and weeded three times, and at the second weeding the plants were thinned as nearly as possible ten inches apart. The Mangolds were pulled, topped and piled up in the field and covered with the tops to protect them from frost, on the 29th of October; after remaining ten days were stored in the cellar.

Owing to the large amount of rain this season, the crop was injured on about one half of the piece, full thirty per cent. Water stood on the surface a day or two at a time on several occasions before it drained off, the drain being wholly under ground.

I observed that the effect of salt upon the crop this year was not nearly as marked as in some other instances. The year before salt more than doubled the crop. That was a dry season, and this a wet one; whether that was the cause of the difference, I am unable to tell.

It will be noticed that, with the exception of the salt, the cost of the manure applied was only the labor of carting and preparing, as the muck and sea-kelp were products of the farm.

*Cost of raising the crop.*

| | |
|---|---|
| 6 cords of compost at $5, | $30 00 |
| Laying out and spreading, | 5 00 |
| 8 bushels salt at 25 cents, | 2 00 |
| Plowing, | 4 00 |
| Harrowing and dragging, | 3 00 |
| 2 pounds seed at 75 cents, | 1 50 |
| Sowing, | 75 |
| Hoeing, weeding and thinning, | 12 00 |
| Harvesting, | 14 00 |
| | $72 25 |

| | | |
|---|---|---|
| The weight of the crop nine days after being pulled, 19 tons 10 cwt. 78 lbs., market value $15 per ton, | | 293 08 |
| Allowing $2 per ton for marketing, | 39 25 | |
| Cost of raising, | 72 25 | 111 50 |
| Profit, | | $181 58 |

BENJAMIN P. WARE.

## STATEMENT OF J. D. W. FRENCH.

### STATEMENT CONCERNING A CROP OF MANGOLD WURTZELS.

October 29th, 1872.

The land occupied by this crop was measured by the Committee and found to contain 22,720 square feet, something over one-half acre. The Committee then measured off one-twentieth of the whole piece, which was considered an average lot, to be weighed at harvesting. This I have done, and the weight was 1800 pounds, which would give as the yield of the whole piece 36,000 pounds, or 18 tons of Mangolds.

The crop of 1870 was grass of very poor quality and small in quantity. The land had been in grass many years and most of it was low and wet. In the Summer and Fall of that year, I drained the whole piece, of which this is a portion, with tile drains.

The crop of 1871 was corn, and from two and a half to three cords of stable manure were used. The soil varies from a peaty to a gravelly loam. The manure was carted on and ploughed in during the Autumn of 1871, and the land was cross-ploughed in the Spring. The depth of the ploughing was from seven to eight inches. The seed was sown May 17th, by machine, in drills about thirty inches apart. The plants were thinned out to twelve or fifteen inches apart in the rows. In reckoning the labor, although more than one man and also horses were employed, I have calculated the time on the basis of one man's work for a day.

*Dr.*

| | |
|---|---|
| 4 cords of manure, | $40 00 |
| ½ bushel agricultural salt, | 22 |
| 1½ days' ploughing, | 3 00 |
| 2½ days' ridging and sowing, | 5 00 |
| 6 days' hoeing and thinning, | 12 00 |
| 5 days' harvesting, | 10 00 |
| 4 pounds seed, | 3 00 |
| Interest and Taxes, | 4 00 |
| | $77 22 |

*Cr.*

| | |
|---|---|
| 36,000 pounds or 18 tons of Mangolds, equal to 600 bushels at 25 cents per bushel, - | $150 00 |
| Balance to Cr., - - - | $72 78 |

As we are considering only the marketable portion of the crop, we have not taken into account the leaves, which according to analysis are as valuable as the roots themselves.

It might be a matter for consideration, also, as to how much of the manure remains in the soil for future crops. The use of the salt was simply an experiment based on analysis. Johnston gives three-fourths to one and a fourth per cent. of saline matter to the Mangold (root.)

J. D. W. French.

STATEMENT OF J. J. H. GREGORY.

I enter for premium my crop of Hubbard Squashes. They were grown on several different pieces of land, all on the same farm, the aggregate measure of which was six and four-sevenths acres. All the land had been in tillage for several years. Most of it was a strong loam, underlaid with gravel. The crop was planted between the 20th and 25th of May. The manure used was very rich, too rich for this very wet season, causing an excessive growth of vine. The manure was a compost of muck, barn manure, glue manure and fish. About eight cords were applied to each acre and thoroughly worked in by plough and harrow. The hills were nine by ten feet and at the ultimate thinning two plants were left in each, which, as the event proved, was just one too many. Were it not for some danger from the attack of the borer, I would never leave more than one vine to each hill.

*Cost of Crop.*

| | |
|---|---|
| Six and four-sevenths acres of land, rent of, | $100 00 |
| 52 cords of manure and spreading of same - | 520 00 |
| *Amount carried up* - - | $620 00 |

| | |
|---|---|
| *Amount brought up* | $620 00 |
| Ploughing of land, | 36 00 |
| Harrowing and cultivating, | 20 00 |
| Planting, | 9 00 |
| Seed, | 12 00 |
| Cultivating four times, | 15 00 |
| Hoeing four times, | 25 00 |
| Liming once, | 4 00 |
| Cutting and collecting, | 15 00 |
| | $756 00 |

*Value of Crop.*

| | |
|---|---|
| 42 tons at $40 per ton, | $1680 00 |
| Deduct cost, | 756 00 |
| Profit, | $924 00 |

MARBLEHEAD, 8th Nov., 1872.

This is to certify that I have this day measured the several tracts of land on the farm of James J. H. Gregory, Esq., that were planted to Hubbard Squash the past season, and have found them to contain six and four-sevenths acres.

FRANKLIN REYNOLDS.

STATEMENT OF J. J. H. GREGORY,

TO CHAIRMAN OF COMMITTEE ON ROOTS:—The piece of American Improved Savoy Cabbage, which I enter, contains 27,000 feet, on which the cabbage by actual measure are two feet apart in the rows, while the rows are three feet apart. The number of plants on the piece, suppose every space to be occupied, would be 4,500. As there are about one hundred missing spaces, the actual number is about 4,400; of these, five-sixths will average seven inches in diameter, and are worth on the ground ten cents a head. The remainder, taken as they run, are worth on an average four cents a head. I do not

think there is a cabbage on the piece that has not advanced so far as to form a head. This variety of Savoy I consider of superior excellence for market purposes, from the fact of its being so reliable for heading and making so large a head on so short a stump. This piece was raised on an old onion bed, hence the quantity of manure to the acre was less than I am in the habit of applying, it being at the rate of about four cords to the acre. The quality of the manure was very superior, it being made up of a compost of barn manure, sea manure, glue manure and fish heads and sound bones. The seed was planted about the 20th of June in the hills, which were two feet apart, while the rows were three feet apart. The crop received the usual treatment of three cultivatings and three hoeings. The cabbage worm was fought with a compound made up of twenty parts air-slaked lime, three parts superphosphate and one part of carbolate of lime. The compound *appeared* to be efficacious, but this, my first test, demonstrates nothing, although my acre of Marblehead Mammoth Drumhead, to which it was applied several times during the season, appeared to receive a decided benefit.

*Cost of Production.*

| | |
|---|---|
| Manure teamed and spread, 4 cords, | $40 00 |
| Ploughing of land, | 3 00 |
| Harrowing and cultivating, | 2 00 |
| Marking out and planting, | 4 00 |
| Seed, | 2 00 |
| Thinning out, | 2 00 |
| Applying compound and cost of, | 4 00 |
| Three hoeings, | 8 00 |
| Three cultivatings, | 8 00 |
| | $73 00 |
| Hire of land, | 20 00 |
| | $93 00 |

| | |
|---|---|
| 3665 heads at 10 cents, - - - | $366 50 |
| 733 heads at 4 cents, - - - | 29 32 |
| | $395 82 |
| Subtract cost, - - - - - | 93 00 |
| Profit, - - - - | $302 82 |

Cabbages of all kinds are very dear this fall, which makes the profits of a good crop figure remarkably high.

MARBLEHEAD, Nov. 8, 1872.

This is to certify that I have this day measured the piece of land on the farm of James J. H. Gregory, Esq., on which his Improved American Savoy Cabbages are now growing, and find it to contain 27,000 feet.

FRANKLIN REYNOLDS.

STATEMENT OF J. J. H. GREGORY.

I enter for premium one lot of Stone Mason Cabbage, containing an area of 47,808 feet. This piece was planted June 12th, the seed being dropped into hills averaging two feet apart, while the rows average three feet apart. The land, which was in sward, was broken up this spring and received a good coat of very rich manure, at the rate of eight cords to the acre. The manure was a compost of muck, clay, rotten kelp, herring and the heads and sound bones of fresh fish with some glue manure. The manure was worked in by Shares' harrow. The crop received the same treatment as the piece of Savoy, with the exception that the cut-worms having worked badly, much of it had to be replanted in parts several times over.

The cost of production was as follows:—

| | |
|---|---|
| Interest on land, - - - - | $16 00 |
| Manure and spreading, - - - | 90 00 |
| Ploughing, - - - - - | 6 00 |
| Harrowing and cultivating, - - - | 3 00 |
| *Amount carried up* - - | $115 00 |

| | |
|---|---|
| *Amount brought up* - - | $115 00 |
| Marking out and planting, - - - | 6 00 |
| Seed, - - - - - - | 3 00 |
| Thinning out, - - - - | 3 00 |
| Applying compound and cost of, - - | 7 00 |
| Three hoeings, - - - - | 13 00 |
| Three cultivatings, - - - - | 12 00 |
| Transplanting into vacant spaces, - - | 3 00 |
| | $162 00 |

*Value of Crop.*

| | |
|---|---|
| 5976 heads at 11 cents each, - - - | $657 36 |
| 1584 heads at 6 cents each, - - | 95 04 |
| | $752 40 |
| Deduct cost, - - - - - | 162 00 |
| Profits, - - - - | $590 40 |

In estimating value of crop, I have put it at two cents less per head than the present value of cabbages, of equal quality, in Boston market, and have allowed about one hundred as the number of vacant spaces on the piece.

I have deducted three hundred and sixteen from the crop, that number not having formed heads of any market value; still, such cabbages have a value, for by protecting them over winter in a growing position, nearly all will make good market heads by spring.

James J. H. Gregory.

Marblehead, 8th Nov., 1872.

This is to certify that I have this day measured the piece of land on the farm of James J. H. Gregory, Esq., on which his Stone Mason Cabbage are now growing, and find it to contain 47,808 feet.

Franklin Reynolds.

STATEMENT OF DUDLEY H. PORTER.

HAMILTON, Nov. 12, 1872.

GENTLEMEN:—The land on which the Ruta Bagas grew, which I offer for premium, has been in English grass for the last eight years. Ploughed the first time in November, 1871: cross-ploughed again this last June and harrowed; finished June 20th; sowed in drills about three feet apart. The crop is 196 bushels, sixty pounds to the bushel, on the half acre, worth in market 62 cents a bushel.

| | |
|---|---|
| Value of 2¼ cords of manure, | $18 00 |
| Labor and team in hauling and applying the same, | 5 00 |
| Seed, | 60 |
| Cultivating and weeding, | 6 00 |
| Transplanting, | 2 00 |
| Two plowings and harrowings, | 6 00 |
| Harvesting, | 7 00 |
| | $44 60 |
| Market value, | $130 40 |
| Cost, | 44 60 |
| Income, | $85 80 |

DUDLEY H. PORTER.

## TREADWELL FARM.

The Committee on the Treadwell Farm report that the seven years' lease to Mr. Ariel H. Gould terminates next April, and that Mr. Gould has complied with the terms of the lease satisfactorily to the Committee; he having applied to the farm ninety cords of good merchantable manure the first year, and fifty cords each following year until this year, in which he has

applied thirty-five cords, making in the aggregate fifteen cords more than required. He has not, however, dug and applied the two hundred loads of muck per year according to the terms of the lease ; for the reason that, having tested the muck which is on the farm, the Committee were satisfied that it was of so poor quality as to be of little or no value. He was therefore excused from its further use.

The farm has been very much improved under the management of Mr. Gould. Instead of the bare and barren appearance of seven years ago, with no sod and little else but stunted sorrel and moss upon a greater part of the farm, it now has, on the larger portion, a firm and well established sod, giving indication of a fertility unknown to the farm before.

The products this year have been eighteen tons English hay, one ton rowen, (much more might have been cut, but Mr. Gould preferred to feed it,) a quantity of corn fodder and of turnips. Mr. Gould was unfortunate in having a field of squashes eaten up by the bugs, and in the failure of the seed to come up on a piece of turnips.

The farm-house has been newly shingled the last year, at a cost of $43.22. This had become absolutely necessary to make it habitable.

The question now arises, what shall be done with the Treadwell Farm ? The present tenant does not wish to renew his lease ; and in the opinion of your Committee, if let to such a tenant as would be likely to want it, the farm would certainly depreciate from its present condition, and become a reproach to the Society. For very few men have opportunity to apply the quantity of manure that Mr. Gould has. May not, therefore, the question of selling it be properly considered at this time ? It is believed that it can now be sold for a sum, which, properly invested, would bring to the Society an income double the present rent of the farm. The Society would then be relieved from all further anxiety on the subject.

*Committee*—Benjamin P. Ware, William Sutton, George B. Loring, Charles P. Preston, J. L. Newhall.

## DESTRUCTION OF CANKER WORMS.

The Committee on the "Destruction of Canker Worms" have carefully attended to their duty and submit the following report.

The Society offers two classes of premiums—one "for the best conducted experiment in preventing the ravages of the canker worm," and one for "a new, cheap and effectual remedy against the ravages of the canker worm."

For the first named premium there were two entries, one by Mr. Thomas Sawyer of Boxford, and one by Mr. Charles K. Lake of Topsfield. The Committee visited the orchards of both competitors in the first part of July, when the extent to which the orchards had been eaten could be easily seen. Mr. Lake entered two orchards, which had been mainly protected by Ordway's Protector, of which further mention will be made. Although no statement has been submitted by Mr. Lake, and although he was suddenly called from home just before the Committee visited his orchards, so that they were unfortunately deprived of his valuable personal explanations, yet the Committee by inquiry of others were able to arrive at what seemed to them a satisfactory conclusion.

The protector chiefly used by Mr. Sawyer is simply a trough or gutter laid upon the ground around the tree, and filled with coal tar from the gas works. His statement, which is herewith submitted, gives a very clear account of the course of experiment which has led him to adopt this remedy. Many of his trees were almost entirely free from signs of the canker worm, certainly perfectly protected from practical injury to the fruit. Your Committee recommend that he be awarded the first premium of twenty-five dollars.

There were two entries for the hundred dollar premium; one by Mr. Sawyer and one by Mr. Thomas K. Leach of Topsfield. Your Committee regarded both entries as substantially for the same thing. Mr. Sawyer uses a trough or gutter having a rectangular channel, while Mr. Leach cuts out a triangular channel, thereby wasting less stock, presenting a wider surface of tar and yet requiring less to fill the trough. Mr. Leach has

manifestly made an improvement in the construction of the trough, but as troughs somewhat similar to these are said to have been used in the town of Danvers many years ago, your Committee think neither of the above named gentlemen entitled to the premium for a "*new*, cheap and effectual remedy for the ravages of the canker worm."

They recommend, however, that in consideration of the value the introduction of these troughs is likely to be to the public, a gratuity of fifteen dollars be awarded to Mr. Leach for his improvement in their construction.

Perhaps it should here be stated that one member of the Committee dissents, for reasons which he has embodied in the accompanying Minority Report. We understand that he objects to giving any premium whatever, because he believes that the destruction of the canker worm will be accomplished soonest by letting it alone. But assuming the policy of offering these premiums to be sound, he would agree with the majority in respect to the proposed awards. We have here neither time nor space to discuss his view of the subject, but for the benefit of those orchardists, who do not accept his theory and are determined to fight the canker worm, we wish to present the facts brought to the notice of the Committee, and the conclusions drawn by the majority in reference to the different methods of opposing the canker worm now in use.

The troughs used by Mr. Sawyer are made of two by three joists sawn from two-inch plank. A channel, an inch or more deep and an inch and a half wide, is grooved out and the stock is then sawn off in a mitre box at suitable lengths for different sized trees, and the pieces nailed together, one side slightly, so that it can easily be removed when placed around the tree. A square box or trough is thus made, which is laid level on the ground around the tree. The space between trough and tree-trunk is filled with dirt, the trough itself filled with coal tar from the gas works, and the work is done. On ploughed land it is easy to level up the earth around the tree, but on grass ground it may be necessary to carry sand or dirt on which to place the trough. The troughs first used by Mr.

Sawyer had a cover of boards to prevent the rain and leaves from getting into the tar. But he finds the plain troughs just as effective at less than half the expense, although of course they require a little more care. He states that he made his troughs himself, and that they cost from twelve to seventeen cents per tree. Of course they can be made from the cheapest, coarsest plank, and after they are laid down the tar will help to preserve them many years. The cost of the coal tar is said to be small.

Mr. Sawyer states that he found it necessary to stir the tar but two or three times in the Spring or Fall, and that few troughs required refilling. At the time of holding the annual Fair in Gloucester, he told us that by stirring the tar then in the troughs many of them would effectually bar the passage of the grub. These statements seem to show that the trees will require but little labor or expense for several years after the troughs are put down. We have also made inquiry of other parties who have used these troughs, and the testimony is unanimous as to their effectiveness when properly used.

The troughs used by Mr. Leach differ from those of Mr. Sawyer only in having a triangular channel, which Mr. Sawyer admits to be an improvement. Mr. Leach thinks his troughs can be furnished ready for the trees at twenty-five cents each, as orchards average. Of course the expense will largely depend on the quality of the lumber used.

Ordway's Protector is an ingenious metal contrivance encircling the tree, and suspended from it by a cloth, and presenting sharp edges over which, it is claimed, the grub cannot pass It was patented some years ago and is quite expensive. The design being simply to prevent the ascent of the grub, it has been found that the grub, finding no way of climbing the tree, lays her eggs on the cloth by which the Protector is suspended, and on the trunk of the tree below. As soon as the young worms are hatched, they ascend the tree and climb over the Protector. To overcome this difficulty, Mr. Lake covered the trunk of the tree below the Protector with cloth, so that after the grubs had laid their eggs, it could be removed and the eggs

destroyed with the cloth. The result of his experiment showed that the Protector thus used was quite successful, although the Committee thought the trees were damaged about as much as the average of trees protected by other methods. Perhaps Ordway's Protector is as effectual a preventive as anything which does not cause the death of the grub before laying her eggs. Mr. Sawyer states that, by tarring the trees above the Protectors, he became satisfied that the grubs could not pass over it, but he also states that he caught grubs and young worms ascending the tree at the same time. He also found large numbers of young worms hatched upon the stone walls by the side of the trees, from which it is fair to presume that they would travel to the tree.

If it is a fact that the grubs lay their eggs upon the stone walls and stubble and continue to run until after the young worms begin to hatch, it seems to be clearly demonstrated that no protector can effectually save the tree unless it causes the death of the grub or prevents the ascent of the newly hatched worms. The expense and the fact that a new cloth for both tree and Protector must be annually supplied, constitute the principal additional objections to a general use of Ordway's Protector.

There was also brought to the notice of the Committee, by Mr. John Bradstreet of Wenham, a zinc protector, consisting of a trough surrounding the tree and designed to be filled with kerosene oil. This costs twelve cents per inch (in diameter), and was patented in 1865. We were unable to pronounce upon the effectiveness of this protector; the only objection raised was that of expense. Another contrivance brought to the notice of the Committee has been patented, we understand, by Mr. Mears, of Essex. This consists of a trough or gutter of coarse cloth or bagging. A hoop is sewn into a cloth, the upper end of which is tied tightly around the tree, and by raising the hoop a gutter is formed, which is to be filled with tar.

The tar weeps slowly through the cloth, constantly presenting a surface of fresh tar underneath, over which the grub can not pass. And if the grub is able to pass over the underside,

she still has to cross the tar in the trough. We did not hear that this remedy had been tried sufficiently to test its value, but if not too expensive, it may prove a useful preventive against the ravages of the canker worm.

The application of tar or printers' ink to the trunk of the tree, with or without tarred paper, is probably the most common method of preventing the ascent of the grub. It is generally believed that ink is better than tar, because it requires less frequent applications, still there is a wide difference in the estimates of its value by those who have used it.

Mr. Sawyer states that in his case ink was too expensive, and yet the writer of this has used ink on an orchard of ten or twelve hundred trees for the last four years, and has protected them from substantial injury to the fruit at an expense probably less than would have been required by any other known method. These apparently conflicting statements can doubtless be reconciled on the theory of difference in location. It is well known that the grub begins to run as soon as the ground is thawed after a severe freeze, and continues to run whenever the weather is warm enough through the winter and spring until the season is over. The warmer and dryer the location the sooner and oftener will the grub make her appearance, and consequently an orchard situated on a southerly exposure, on warm land, will require very much more attention than one on a cold, wet soil exposed to the north. Mr. Sawyer's orchard is situated on warm, dry land, while mine is on a colder soil, inclined to the north, and hence there is no doubt that it would require much more labor and expense to protect his orchard equally with mine by this method of using tar or ink.

The chief objection to the use of tar or ink is the uncertainty of accomplishing the desired end. The grubs will sometimes run when least expected, or a storm will set in and prevent renewal of the tar or ink, while it nowise hinders the grub. Sometimes, too, in inking a large orchard, the workmen become careless and occasionally miss a tree, or make an imperfect application of the ink, so that the grubs can pass, and one omission of this kind is fatal when the grubs run thickly.

If the ground shuts up early in the fall, and remains frozen till late in the spring, the trees can be pretty effectually protected by a careful application of ink for from two to four weeks. But it is extremely difficult in our open winters and early springs to do more by this method than to repel the main army of grubs from our orchards.

These methods of preventing the ravages of the canker worm are all that have been brought to the notice of the Committee. Any of them properly used will doubtless prevent serious loss in the crop of apples, but the farmer desires to use that method which best combines economy and effectiveness. None of them will prove satisfactory without the utmost care in their application, for the grub is a most persistent and determined creature and only succumbs to impossibilities. But it is also true, that the more thoroughly the trees are protected the less the attention afterwards required.

The first year that tar, ink or any substance which kills the grub is used, there is constant danger that they will appear in such numbers as to "bridge over," and thus enable some to cross on the dead bodies of their comrades. But after an orchard has been well protected, there is little danger that the grubs will next year go up in sufficient numbers to do this.

It is evident enough that every orchardist can protect himself from serious injury by the canker worm if he chooses to make the effort. Let him invest sparingly, if at all, in new-fangled notions and patents, but adopt those methods which have been tried and found successful, and which do not require large outlay. Let him remember that "Eternal vigilance is the price of *fruit*," and that he must do his work with the utmost thoroughness to ensure success. By so doing his eyes will not be pained by the sight of sere and reddened trees in June, nor his cellars lack the red and golden harvest of October.

*For the Committee*—Joseph S. Howe.

### MINORITY REPORT.

The opinion of the undersigned, as one of the Committee, is in brief to *let the canker worms quite alone*, and if all apple

growers in any locality infested would omit using any *patent tree protector*, *tar* or any other preparation, they would find that in two or three years the canker worms would disappear from starvation, or lack of sufficient food, of a proper kind, to bring them to perfection, sufficient to propagate their kind for another year's operations.

I have come to this conclusion after careful observation and my own practice ever since the appearance of canker worms in my locality. A majority of my neighbors have used every known remedy to save their *apple crop*, but have met with very poor success, while those who have adopted the "*let alone policy*," have done equally as well, and in some cases better.

In short, I consider all of the so-called *tree protectors*, *tar*, *printers' ink*, *etc.*, (except for puffing a worthless article,) so much money and time thrown away.

Respectfully submitted,

WILLIAM BRICHER.

STATEMENT OF THOMAS SAWYER.

TO THE COMMITTEE ON DESTRUCTION OF CANKER WORMS:—

When the canker worms in small numbers first made their appearance in my orchard, as many as eight years ago, I thought I would pay no attention to them. But as they increased very fast each year, I found I must do something, or my trees would be entirely destroyed. I commenced experimenting in 1870, by putting tarred paper and printers' ink on about one acre, or nearly one hundred trees, and the same number with paper and tar. I also put Ordway's Protector on forty or fifty trees. The Ordway Protector protects them from the grub, but not from the worm, as I found in the last days of April the worms were ascending the trees over the Protector. I placed paper and tar above the Protectors, and caught thousands before the middle of June, when every leaf was eaten. The ink was too expensive, as it was necessary to apply it every day, or at least every other day. I tried about one hundred trees with boxes, to which was attached a gutter filled

with gas tar, and which cost about fifty cents per tree. I also tried a few trees with gutters laid on the ground and filled with tar, which I found answered the same purpose. The cost was about fifteen cents per tree.

Last fall (1871,) I put these troughs around four hundred trees, at a cost of about twelve cents per tree. The foliage of these trees was entirely eaten in 1870. The tar was stirred two or three times in the fall and the same in the spring. Care must be taken to prevent the grubs from bridging over, or the gutter becoming filled with leaves. I found this to be a sure thing, if properly attended to.

This year the trees have not been eaten to injure the fruit. The foliage of the same trees was entirely destroyed in 1870. I shall have from two to three hundred barrels of good apples this year, 1872. If any one is interested in my method, I should be happy to give them any information I can, and the trees speak for themselves.

THOMAS SAWYER.

*Boxford, Oct.* 1, 1872.

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## 1776. International Exhibition, Philadelphia. 1876.

OFFICE OF THE UNITED STATES CENTENNIAL COMMISSION.

PHILADELPHIA, PA., October, 1872.

*Essex County Agricultural Society,*

*Chas. P. Preston, Sec'y, Danvers, Essex Co., Mass.*

The Anniversary of the Independence of the United States in the year 1876, is to be celebrated by an exhibition of the products, arts, and industries of the country, and of the world. This is in accordance with an Act of Congress approved March 3d, 1871. By this act the task of preparing and superintending the exhibition was imposed upon the United States Centennial Commission, consisting of two members from each of the states and territories. The Commissioners have twice met in general session, a permanent organization has been

effected, and the chief outlines of the plan for the exhibition have been agreed upon.

This exhibition is to be international and universal—international inasmuch as all nations will be invited to participate in it; and universal, because it will include a representation of all natural and artificial products, all arts, industries, and manufactures, and all the varied results of human skill, thought and imagination.

The outlines of a simple yet comprehensive classification have been adopted. There will be ten departments, each subdivided in ten groups, and these again into classes. The details of this classification are now being elaborated and will be published in due season, together with such rules and regulations as may be found necessary for the proper conduct and management of the exhibition.

It is intended that ample space shall be assigned to each state, territory, and foreign country, for a just and proper display of their products. It is believed that not less than fifty square acres of floor space, under roof, will be required for this purpose. A site combining the advantages of a sufficient extent of level ground, with picturesque and cultivated surroundings, easy of access by rail, water, and by ordinary roads, has been assigned for the buildings and grounds at Fairmount Park, in the City of Philadelphia. The exhibition will open in April, and close in October.

Each State of the Union will be expected to send its peculiar products, illustrating its resources, both developed and undeveloped. A complete exhibition of this kind by all the States, will afford the means of comparing their industrial condition and capabilities. The products of mining and of agriculture will occupy a large portion of the space allotted to each state, and will receive their just share of attention in this universal display.

An undertaking so patriotic in its conception, so vast in its proportions, and so useful in its results, commends itself to the hearty sympathy and support of an intelligent people. Patriotism, as well as an appreciation of the industrial, educational, and moral influences of well organized exhibitions, should impel all citizens to lend a helping hand. It is the duty of the Commission to prepare the way and open the doors, but the people, in their sovereign right and strength, must make the exhibition. By their aid, alone, can it be made a just and comprehensive display of the industrial, intellectual, and moral development of the Nation during the first century of its existence.

The Commission not only relies with confidence upon the aid of the people in general, but it hopes to receive the co-operation of the many state societies and organizations which for so many years have aided in directing and realizing the popular demand for agricultural and industrial exhibitions. The desire to secure, at an early date, your efficient co-operation, has led to this communication, which is made at the request of the Executive Committee of the Commission.

Permit me, in closing, to suggest that the facts herein stated might, with great advantage to the exhibition, be communicated as publicly as possible to your members and exhibitors, and that, if agreeable, they should be incorporated in your printed reports. A committee of your members might be appointed to consider and suggest such measures as may appear most desirable to promote the success of the object for which the Centennial Commission is appointed. A general plan for the organization of Co-operative Centennial Associations in the several states and territories is now under consideration, and when perfected will be published for distribution.

Please acknowledge the reception of this communication.

Very Respectfully,

Your Obedient Servant,

WM. PHIPPS BLAKE,

*Executive Commissioner.*

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## UNDERDRAINING LAND.

Mr. C. O. Cummings, Superintendent of the Andover Town Farm, made the only entry of underdrained land, which is a piece of said farm, containing four acres and five rods of clay land with a mixed sub-soil of clay and loam. Sept. 23d, three of your Committee visited it. Notwithstanding the preceding Thursday and Friday were days of almost incessant rain, the ground even in the hollows or sags was apparently dry enough to cultivate hoed crops, and although a heavy second crop had

been cut, it was covered with a thick growth of grass, and presented a *splendid* appearance.

After it was abandoned as a brick yard, for which it was formerly used, up to 1865 we know nothing of the condition of the land. In 1865, one of our number helped harvest what it produced, which, he thought, was about one ton of pretty good swale hay. In 1868, Mr. Cummings, having obtained permission of the overseers, underdrained it by laying twelve hundred and sixty-eight feet of tile, with a fall of fifteen inches per one hundred feet, and twenty-one and five-elevenths rods of covered stone drain. Adjoining it, on the north, is a small piece of meadow, with numerous springs, and through which, also, flows a large quantity of water from beyond the railroad. On the line between this meadow and the land under consideration, Mr. Cummings dug a trench, four feet deep, the entire length of the meadow. In the bottom of the trench he laid a covered stone drain, and filled the remainder of the trench to the surface of the ground with small stones, and upon these he built a substantial stone wall. From the drain under the wall a 3-inch tile drain is laid entirely across the land to a brook on the southerly side, and thus a great amount of water is carried directly to the brook which otherwise would run over and soak into the land.

The position of this drain, as well as all the others, the peculiarity in the position of which was made in order to tap certain springs, and which Mr. Cummings says he should never again pay any attention to, may be seen in the accompanying plan. In 1868 and 1869 the land was planted to potatoes, and a medium quantity of barnyard manure was used. The result was a heavy crop, the exact amount of which is forgotten. In 1870, it was seeded to grass with oats. The oats yielded well.

In 1871, a large amount of both first and second crop was taken from the land, which was thought by good judges to be in the aggregate twelve tons. In 1872, the produce of the land was estimated by a member of your Committee, who in 1865 helped harvest it, to be eight tons of first crop and four of rowen.

*Cost.*

| | |
|---|---|
| 936 feet 3-inch tile, at $30 a thousand, - | $28 08 |
| 332 feet 2-inch tile, at $18 a thousand, - | 5 97 |
| Laying of same at 75 cents per rod, - | 57 63 |
| 21 5-11 rods covered stone drain at $1.25 - | 26 82 |
| Total, - - - - - | $118 50 |

Setting aside the years 1868, 1869 and 1870, when it was occupied with potatoes and oats, the proceeds of which would, we think, fully cover the expense of tilling and harvesting up to the present time, we have for 1871 twelve tons of hay, which at the low average, for that year, of $35 per ton, $420 00

1872, twelve tons at $30, - - - 360 00

| | |
|---|---|
| Total, - - - - - | $780 00 |
| Cost, - - - - - - | 118 50 |
| Balance, - - . - | $661 50 |

We conclude our report by expressing the opinion, that a man who causes twelve tons of first quality of grass to grow where only one of poor quality grew before, from an inborn love of improvement, deserves as rich a reward as the man who improves his own for his own good. We therefore award Mr. Cummings the first premium of $15 and diploma.

*For the Committee*—J. C. Underhill.

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## REPORTS OF COMMITTEES.

The Committee on Essays and Farm Accounts report.

There were submitted to us the reports of the several Committees, but no essays or statements of Farm Accounts.

The report of the Committee on experiments in raising root crops covered several interesting and valuable statements by competitors, giving account of the expense and income of their experiments, but the Committee did not suppose that

these came within the meaning of " Farm Accounts," and have not considered such for a premium.

We award the premiums offered for Reports of Committees as follows, to wit:

First premium of $10 and diploma, to Joseph S. Howe of Methuen, for report on " Destruction of the Canker Worm."

Second premium of $8, to T. C. Thurlow of West Newbury, for report on " Pears."

Third premium of $6, to J. D. W. French of No. Andover, for report on " Bulls."

For the Committee,

DANIEL E. SAFFORD, Chairman.

*Salem, Nov.*, 1872.

## Dr. EDWARD H. PAYSON, TREASURER, IN ACC'T WITH THE ESSEX AG. SOCIETY, Cr.

| 1871. | | | | 1871. | | | |
|---|---|---|---|---|---|---|---|
| October. | To balance of former account, | | $1260 95 | October. | By Premiums and Gratuities awarded by Trustees | | $1278 00 |
| | To Bank dividends for October, | $409 50 | | | By Tax on Bank Stock paid under recent law of the State | | 195 32 |
| | To receipts of Exhibition at Ipswich, | 949 65 | | | By Expenses as follows : | | |
| | To State Bounty, | 600 00 | 1959 15 | | Expenses of Exhibition paid by Committee, at Ipswich | 682 65 | |
| Nov. | To dividend Tax, Revere Bank, | | 25 36 | | Expenses of Exhibition paid by Treasurer | 269 70 | |
| 1872. Jan. | To Essex Railroad Coupons, | 20 47 | | | Printing | 456 08 | |
| | Coupons of 5-20 Bonds, | 16 31 | | | Dinner Bill | 500 00 | |
| | Div. First National Bank, Salem, | 84 00 | 120 78 | | French's Bill of Crockery | 411 00 | |
| 11 | To Receipts from new members, | | 144 00 | | Secretary's account | 157 71 | |
| April 9. | To Bank Dividends for April, | | 409 50 | | Bill for Diplomas | 34 15 | |
| May | To Coupons 10-40 Bond | | 28 25 | | Rent to Athenæum | 25 00 | 2536 29 |
| July | To Coupons 5-20 Bond | 16 35 | | | Treadwell Farm | 51 02 | |
| | Essex Railroad Coupons | 21 00 | | | Scholarship, G. L. Dodge | 50 00 | 101 02 |
| | Dividend First National Bank | 84 00 | | | By Balance to new account | | 928 83 |
| | Donations from Gen. Sutton | 50 00 | 171 35 | | | | |
| | To Premiums unclaimed | | 195 12 | | | | |
| August. | To Tax on Bank Stock refunded | | | | | | |
| October. | To dividend on Revere Bank, April | 20 00 | | | | | |
| | To dividends First Nat'l Bank, Danvers | 50 00 | 70 00 | | | | |
| October. | To Rent of Treadwell Farm | 250 00 | | | | | |
| | To Coupon 10-40 Bond | 28 00 | 278 00 | | | | |
| | To Donation from the Pres't for scholarship | | 50 00 | | | | |
| | To Premiums unclaimed | | 327 00 | | | | |
| | | | 5039 46 | | | | $5039 46 |
| | To Balance of old account | | $928 83 | | | | |

# FUNDS BELONGING TO THE SOCIETY, OCTOBER, 1872.

| | *On the books.* | *Market value.* |
|---|---|---|
| 16 shares in Warren National Bank, cost | $1595 40 | $2080 00 |
| 15 shares in South Danvers National Bank, cost | 1471 25 | 2100 00 |
| 5 shares in First National Bank, Danvers, par | 375 00 | 500 00 |
| 5 shares in National Revere Bank, cost | 585 87 | 600 00 |
| 8 shares in National Exchange Bank, Salem | 800 00 | 1000 00 |
| 14 shares in First National Bank, Salem | 1402 66 | 1820 00 |
| 12 shares in Mercantile National Bank, Salem | 1226 50 | 1464 00 |
| 23 shares in Merchants National Bank, Salem | 1189 50 | 1472 00 |
| 42 shares in Asiatic National Bank, Salem | 1281 35 | 1680 00 |
| 2 shares in Salem National Bank, Salem | 200 00 | 250 00 |
| *Carried up* | $10,127 43 | 12,966 00 |

| | *Ch'd on books.* | *Market value.* |
|---|---|---|
| *Amount bro't up* | $10,127 43 | $12,966 00 |
| Bonds of the Essex Railroad, par | 700 00 | 630 00 |
| $1500 Bonds of the United States, cost | 1609 00 | 1640 00 |
| Cash on hand as above | 928 83 | 928 83 |
| | $13,365 26 | $16,164 83 |
| Funds in 1871 | 13,697 38 | |
| Loss in 1871—2 | $332 12 | |
| The charge against Treadwell Farm to date is | 485 30 | |
| The charge against Colman Library to date is | 719 22 | |

E. E. EDWARD H. PAYSON, Treasurer.

SALEM, October, 1872.

The undersigned has examined the foregoing account of receipts and disbursements of the Treasurer, and also his statement of the funds belonging to the Society (showing a balance in his hands of $928.83,) and finds the same correctly cast and well vouched.

GEO. D. PHIPPEN, Auditor.

SALEM, Oct. 27, 1872.

## TRUSTEES' MEETING.

A meeting of the Trustees of the Society was held at Plummer Hall, Salem, Nov. 15th.

Present—Messrs. W. Sutton, G. B. Loring, J. L. Newhall, J. Keeley, B. P. Ware, C. P. Preston, E. H. Payson, G. A. Abbott, D. Bradstreet, E. G. Berry, A. M. Bodwell, A. B. Fellows, H. W. Foster, J. D. W. French, J. Flint, J. J. H. Gregory, Joseph S. Howe, R. Jaques, J. P. King, J. Lee, D. W. Low, E. K. Lee, A. Lane, W. B. Morgan, J. Newhall, T. J Ordway, D. H. Stickney, J. R. Swett, A. Sawyer, D. G. Todd and P. T. Winkley.

Gen. Sutton presided, and the following business was transacted.

The Committee appointed to audit the bills of the last show, reported :

| | |
|---|---|
| Receipts, - - - - | $1741 00 |
| Expenses, - - - - | 1480 15 |
| Balance, - - - - | $260 85 |

The several Committees on Farms, Crops, etc., reported, and their reports were considered.

The report of the Treasurer, E. H. Payson, was read by him, and he was unanimously re-elected.

A report of the Committee on the Treadwell Farm was read by B. P. Ware, Chairman, recommending the sale of the farm on the expiration of the lease in April next.

Voted—That the Committee ascertain what sum can be obtained for the farm, and be instructed, if they deem it expedient, to call a meeting of the Society to authorize the sale.

Voted—That the next Show be held at Gloucester.

Voted—That Fifty dollars be appropriated for a scholarship in the Masac husetts Agricultural College, provided the Committee, Messes. A. W. Dodge, G. B. Loring and J. R. Nichols, deem it expedient to expend said sum.

Voted—That a committee of seven be appointed by the chair, to report a list of committees for next Show, and present the same to the Trustees in June for their action.

CHAS. P. PRESTON, Sec'y.

# OFFICERS OF THE SOCIETY

## FOR 1872–73.

PRESIDENT.

WILLIAM SUTTON, of Peabody.

VICE PRESIDENTS.

GEORGE B. LORING, of Salem.
JOSHUA L. NEWHALL, of Newburyport.
JOHN KEELEY, of Haverhill.
BENJAMIN P. WARE, of Marblehead.

TREASURER.

EDWARD H. PAYSON, of Salem.

SECRETARY.

CHARLES P. PRESTON, of Danvers.

HONORARY TRUSTEES.

JOHN W. PROCTOR, of Peabody.
ALLEN W. DODGE, of Hamilton.
JOSEPH HOW, of Methuen.

TRUSTEES.

George A. Abbott, Andover;
Dudley Bradstreet, Topsfield;
Eben G. Berry, Danvers;
Asa M. Bodwell, Lawrence;
G. W. Boynton, Georgetown;
Thomas J. Clark, Salisbury;
Francis Dane, Hamilton;
Alonzo B. Fellows, Ipswich;
Henry W. Foster, Beverly;
J. D. W. French, N. Andover;
James Flint, Middleton;
J. J. H. Gregory, Marblehead;
Joseph S. Howe, Methuen;
Israel Herrick, Boxford;
Richard Jaques, Newbury;
James P. King, Peabody;
John Lee, Manchester;
David W. Low, Gloucester;
Edward K. Lee, Essex;
Andrew Lane, Rockport;
William B. Morgan, Wenham;
Josiah Newhall, Lynnfield;
Warren Ordway, Bradford;
T. G. Ordway, W. Newbury;
Dan'l H. Stickney, Groveland;
Jackson B. Swett, Haverhill;
John L. Shorey, Lynn;
Aaron Sawyer, Amesbury;
Daniel G. Todd, Rowley;
P. T. Winkley, Newburyport.

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NEW MEMBERS—1872.

John Atkinson, Gloucester;
B. D. Appleton, Ipswich;
Wm. Howe Burnham, Essex;
S. A. Burnham, Gloucester;
Fitz J. Babson, Gloucester;
H. A. Burnham, Gloucester;
Horatio Babson, Gloucester;
Aaron W. Bray, Gloucester;
A. M. Burnham, Gloucester;
Geo. R. Bradford, Gloucester;
O. S. Bailey, Amesbury;
Eben Blatchford, Rockport;
Edward H. Brown, Gloucester;
George B. Blodgett, Rowley;
Israel H. Cole, Gloucester;
R. C. Lawrence, Gloucester;
A. F. Lindberg, Gloucester;
C. H. Loud, Amesbury;
E. F. Little, Newbury;
G. B. Loring, 2d, N. Andover;
Ebenezer H. Morse, Salem;
Chester Marr, Jr., Gloucester;
Israel C. Mayo, Gloucester;
L. McFarland, Gloucester;
Josiah Mayo, Jr., Gloucester;
E. W. Merchant, Gloucester;
Frank Marsh, Peabody;
John W. Marshall, Rockport;
George Norwood, Gloucester;
Isaac F. Osgood, No. Andover;

Curtis C. Cressey, Gloucester ;
David M. Cole, Boxford ;
John Cronin, Gloucester ;
John S. Carter, Gloucester ;
Sherman J. Carter, Gloucester ;
C. H. Campbell, Gloucester ;
John Corliss, Gloucester ;
Benjamin F. Cook, Gloucester ;
Benj. H. Corliss, Gloucester ;
John C. Calef, Gloucester ;
Thomas Conant, Gloucester ;
Samuel H. Curwen, Andover ;
J. Merrill Currier, Lawrence ;
Ephraim A. Dane, Hamilton ;
Wm. P. Dolliver, Gloucester ;
Abraham Day, Gloucester ;
C. W. Dennison, Gloucester ;
James Davis, Gloucester ;
John H. Dolliver, Gloucester ;
Stephen Dodd, Gloucester ;
J. Franklin Dyer, Gloucester ;
Wm. C. Dolliver, Gloucester ;
Henry Emanuel, Gloucester ;
Jeremiah Foster, Gloucester ;
Robert R. Fears, Gloucester ;
Robert Fears, Gloucester ;
E. G. Friend, Gloucester ;
Thomas B. Ferguson, Salem ;
Geo. W. Foster, No. Andover ;
Sam'l B. Gregory, Hamilton ;
Addison Gilbert, Gloucester ;
Ghas. E. Grover, Gloucester ;
D. F. Gardner, No. Andover ;
Horatio M. Howard, Newbury ;
Benjamin Haskell, Rockport ;
H. C. L. Haskell, Gloucester ;
Wm. H. Haskell, Gloucester ;
George W. Parsons, Wenham ;
Wm. C. Plummer, Newbury ;
Mark Pitman, Beverly ;
Wilbur F. Proctor, Gloucester ;
Moses B. Perkins, Topsfield ;
Joseph O. Proctor, Gloucester ;
William H. Perrin, Gloucester ;
Henry S. Perrin, Gloucester ;
David S. Presson, Gloucester ;
David Plummer, Gloucester ;
Augustus E. Price, Gloucester ;
Alexander Pattillo, Gloucester ;
N. H. Phillips, Gloucester ;
William A. Pew, Gloucester ;
W. Frank Parsons, Gloucester ;
F. H. Palmer, Boxford ;
George W. Peabody, Wenham ;
John S. E. Rogers, Gloucester ;
Joseph W. Ropes, Danvers ;
George C. Rankin, Beverly ;
John D. Rankin, Lynn ;
Allan Rogers, Gloucester ;
Jacob Rhoades, Lynn ;
Eli F. Stacey, Gloucester ;
Edward Staten, Gloucester ;
Jos. C. Shepherd, Gloucester ;
Cyrus Story, Gloucester ;
John E. Somes, Gloucester ;
Sam'l E. Sawyer, Gloucester ;
John H. Stacey, Gloucester ;
H. G. Sanford, Gloucester ;
B. H. Smith, Gloucester ;
J. Morris Spofford, Groveland ;
Charles F. Stiles, Groveland ;
George Todd, Gloucester ;
John Todd, Gloucester ;
Robert A. Tibbetts, Gloucester ;

Benj. K. Hough, Gloucester;
Edward C. Hoyt, Gloucester;
B. F. Huntington, Amesbury;
Richard Jaques, Newbury;
A. W. Jewett, Manchester;
Moses Knowlton, Essex;
Thos. J. Knowles, Gloucester;
Francis M. Loring, Gloucester;
Gorham P. Low, Gloucester;
George Lane, Gloucester;
T. S. Lancaster, Gloucester;
C. P. Thompson, Gloucester;
H. L. Tenney, Newbury;
Nath'l Webster, Gloucester;
Isaac M. Woodbury, Topsfield;
J. W. Wonson, Gloucester;
John J. Wilson, Gloucester;
M. L. Wetherell, Gloucester;
Aug. H. Wonson, Gloucester;
F. G. Wonson, Gloucester;
Addison Witham, Gloucester;
Nathaniel S. York, Gloucester.

# LIST OF PREMIUMS, &c.

### FAT CATTLE.

Lanesville Granite Company, John Butman, Agent, Gloucester, 1st premium, diploma and $10 00

### BULLS.

S. F. Newman Newbury, Ayrshire Bull, two years old, 1st premium, diploma and 10 00
G. W. Herrick, Gloucester, Bull, two years old, gratuity 8 00
Francis Dane, Hamilton, Jersey Bull, three years old, 1st premium, diploma and 10 00
H. B. Sargent, Salem, Jersey Bull, four years old, 2d premium, 5 00

### MILCH COWS.

Henry G. Kimball, Bradford, Grade Dutch, 1st premium, diploma and 15 00
G. W. Herrick, Gloucester, grade, 2d premium, 10 00
Francis Dane, Hamilton, Jersey, 1st premium, diploma and 10 00
Francis Dane, Hamilton, herd of Milch Cows, Jerseys, 1st premium, diploma and 15 00

### HEIFERS.

John Erwin, Jr., Gloucester, native heifer, three years old, 2d premium, 5 00
Eben Dale, Gloucester, Jersey, two years old, 2d premium, 5 00
G. W. Herrick, Gloucester, grade, two years old, 2d premium, 5 00
John Perkins, Essex, grade heifer, two years old, 1st premium, 5 00
Francis Dane, Hamilton, Jersey heifer, 1st premium, 5 00
Francis Dane, Hamilton, Jersey Yearling, 1st premium, 5 00
F. S. Lovett, Beverly, grade yearling, 1st premium, 5 00
Washington Burnham, Essex, grade yearling, 2d premium, 3 00

### WORKING OXEN AND STEERS.

Thomas G. Ordway, West Newbury, working oxen, 1st premium. diploma and 12 00.

| | |
|---|---|
| Pigeon Hill Granite Company, Rockport, working oxen, 2d premium, | 10 00 |
| R. S. Bray, Newbury, working oxen, 3d premium, | 8 00 |
| Joseph Kittredge, North Andover, working steers, 2d premium, | 5 00 |
| William H. Finley, Danvers, best teamster of oxen, the Loring premium. | 10 00 |

TOWN TEAMS.

| | |
|---|---|
| Gloucester town team of oxen, premium, | 30 00 |
| Rockport town team of oxen, premium, | 30 00 |
| Gloucester town team of horses, viz : | |
| Abram Day's eight horse team, premium, | 5 00 |
| Collins Brothers, six horse team, premium, | 5 00 |
| Town of Gloucester, four horse team, premium, | 5 00 |

STEERS.

| | |
|---|---|
| Joseph Kittredge, North Andover, yearlings, 1st premium, | 4 00 |
| George James, Gloucester, yearlings, 2d premium, | 3 00 |

STALLIONS.

| | |
|---|---|
| Francis Dane, Hamilton, stallion, four years old, 1st premium, diploma and Oliver premium, | 10 00 |
| Jacob Rhoades, Lynn, stallion, three years old, 1st premium, | 8 00 |
| H. L. Hill, Andover, stallion, three years old, 2d premium, | 5 00 |
| T. B. George, Danvers, stallion, three years old, 3d premium, | 3 00 |

BROOD MARES.

| | |
|---|---|
| Francis Dane, Hamilton, mare, 1st premium, diploma and | 15 00 |
| Moses K. Noyes, Newbury, mare, 2d premium, | 10 00 |

FAMILY HORSES.

| | |
|---|---|
| George James, Gloucester, family horse, 1st premium, diploma and | 15 00 |
| Samuel E. Sawyer, Gloucester, 2d premium; | 10 00 |
| C. C. Cressy, 3d premium, | 8 00 |

FARM AND DRAFT HORSES.

| | |
|---|---|
| Henry L. Tenney, Newbury, draft horse, 1st premium, diploma and | 12 00 |
| John Clark, Gloucester, draft horse, 2d premium, | 10 00 |
| George Dennin, Gloucester, draft horse, 3d premium, | 8 00 |
| Edward H. Little, Newbury, draft horse, 4th premium, | 5 00 |

| | |
|---|---|
| Edward F. Little, Newbury; best teamster of horses, Loring premium, | $10 00 |
| Curtis C. Cressy, Gloucester, best pair of draft horses, special premium, | 15 00 |
| Bennett Griffin, Gloucester, pair of draft horses 2d premium, | 10 00 |

COLTS, FIRST CLASS.

| | |
|---|---|
| J. Otis Winkley, Newburyport, four year old colt, 1st premium, diploma, and | 10 00 |
| C. Mitchell, Beverly, four year old colt, 2d premium, | 6 00 |
| Curtis C. Cressy, Gloucester, four year old colt, 3d premium | 4 00 |
| George James, Gloucester, three years old, 1st premium, | 8 00 |

COLTS, SECOND CLASS.

| | |
|---|---|
| Francis Dane, Hamilton, two years old colt, 1st premium, | 6 00 |
| John Perkins, Essex, two years old colt, 2d premium, | 2 00 |
| F. L. Lovett, Beverly, yearling, 1st premium, | 6 00 |

SHEEP.

| | |
|---|---|
| Francis Dane, Hamilton, best flock, 1st premium, diploma and | 8 00 |
| Francis Dane, Hamilton, best lambs, 1st premium, | 3 00 |

SWINE.

| | |
|---|---|
| Joseph Kittredge, North Andover, for breeding sow, 2d premium, | 5 00 |

PLOUGHING, DOUBLE TEAMS.

| | |
|---|---|
| Bray and Little, Newbury, 1st premium, diploma, and | 12 00 |
| Joseph Horton, Ipswich, 2d premium, | 10 00 |
| Samuel James, Gloucester, 3d premium, | 9 00 |

PLOUGHING, SINGLE TEAM.

| | |
|---|---|
| Thomas G. Ordway, West Newbury, 1st premium, diploma and | 10 00 |

PLOUGHING WITH HORSES.

| | |
|---|---|
| Curtis C. Cressy, Gloucester, 1st premium, diploma and | 12 00 |
| Sylvester Dane, Hamilton, 2d premium, | 10 00 |
| Edward H. Little, Newbury, 3d premium, | 8 00 |
| Henry L. Tenny, Newbury, 4th premium, | 6 00 |

PLOUGHING WITH SWIVEL PLOUGH.

| | |
|---|---|
| William Foster, North Andover, 1st premium, diploma and | 12 00 |

PLOUGHING BY BOYS.—*Sutton Premiums.*

| | |
|---|---|
| William H. Finley, Danvers, 1st premium, | $25 00 |
| Willie Merrill, West Newbury, 2d premium, | 15 00 |
| Willie G. Horton, Ipswich, 3d premium, | 10 00 |

AGRICULTURAL IMPLEMENTS.

| | |
|---|---|
| E. E. Lummus, Boston, best collection, diploma and | 15 00 |
| Whittemore Brothers, Boston, hay-cutter, gratuity, | 3 00 |
| E. E. Lummus, Boston, Randall's Harrow, gratuity, | 3 00 |
| F. F. Holbrook & Co , Boston, Taylor's rake, gratuity, | 2 00 |
| F. F. Holbrook & Co., Boston, cultivator, gratuity, | 2 00 |
| F. F. Holbrook & Co., Boston, swivel plough, gratuity, | 2 00 |
| Ames Plough Co, Boston, hay tedder, gratuity, | 3 00 |
| Ames Plough Co , Boston, mower, gratuity, | 3 00 |
| W. G. Prescott, Hampton Falls, N. H., mower, gratuity, | 5 00 |

CARRIAGES.

| | |
|---|---|
| Loud Brothers, West Amesbury, buggies and wagon, 1st premium, diploma, and | 15 00 |
| H. G. & H. W. Stevens, West Amesbury, buggies and wagon, 2d premium, | 10 00 |
| Pike & Whipple, Peabody, express wagons, premium, | 5 00 |

BUTTER.

| | |
|---|---|
| Sarah L. Ridgway, West Newbury, 1st premium, Harris's Insects and | 10 00 |
| Francis Dane, Hamilton, 2d premium, | 8 00 |
| Mrs. Oliver Patch, Hamilton, 3d premium, | 6 00 |
| Joseph Hale, Rowley, 4th premium, | 4 00 |

FARMS.

| | |
|---|---|
| Francis H. Appleton, Peabody, diploma and 1st premium, | 30 00 |

ROOT CROPS.

| | |
|---|---|
| Dudley H. Porter, Hamilton, Ruta Bagas, diploma, 1st premium, | 10 00 |
| Benj. P. Ware, Marblehead, mangolds, diploma, 1st premium, | 10 00 |
| J. D. W. French, No. Andover, mangolds, 2d premium, | 8 00 |
| J. J. H. Gregory, Marblehead, cabbages, diploma, 1st premium, | 10 00 |
| J. J. H. Gregory, Marblehead, squash, diploma and 1st premium, | 10 00 |

UNDERDRAINING LAND.

| | |
|---|---|
| C. O. Cummings, Andover, underdraining land, diploma and 1st premium, | 15 00 |

CANKER WORMS.

| | |
|---|---|
| Thomas Sawyer, Boxford, experiment for destruction of canker worms, 1st premium, | 25 00 |
| Thomas K. Leach, Topsfield, improved boxes for destruction of canker worms, gratuity, | 15 00 |

REPORTS OF COMMITTEES.

| | |
|---|---|
| Joseph S. Howe, Methuen, report of committee, diploma and 1st premium, | 10 00 |
| T. C. Thurlow, West Newbury, report of committee, 2nd premium, | 8 00 |
| J. D. W. French, No. Andover, report of committee, 3rd premium, | 6 00 |
| Awarded by Committee on poultry, | 71 00 |
| " " vegetables and garden seeds, | 71 00 |
| " " fruit, | 191 00 |
| " " flowers, | 23 00 |
| " " counterpanes, rugs, &c. | 35 50 |
| " " fancy articles | 54 00 |
| " " general merchandise, | 18 00 |
| " " bread and honey, &c. | 22 50 |
| " " articles manufactured from leather, | 21 00 |
| | $1,369 00 |

# RECAPITULATION.

FARMS.

| | | | |
|---|---|---|---|
| Amount awarded to Farms, | | $30 00 | |
| " " | Underdraining Lands, | 15 00 | |
| " " | Ploughing, | 139 00 | |
| " " | Farm Implements and Carriages, | 68 00 | |
| | | | $252 00 |

FARM STOCK.

| | | | |
|---|---|---|---|
| Amount awarded to Fat Cattle, | | 10 00 | |
| " " | Bulls, | 33 00 | |
| " " | Milch Cows, | 50 00 | |
| " " | Heifers, | 38 00 | |
| " " | Working Oxen and Steers, | 45 00 | |
| | *Amount carried forward* | $176 00 | 252 00 |

| | | | | |
|---|---|---|---|---|
| | | *Amount brought forward* | $176 00 | 252 00 |
| Amount awarded to | | Steers, | 7 00 | |
| " | " | Town Teams, | 75 00 | |
| " | " | Stallions, | 26 00 | |
| " | " | Brood Mares, | 25 00 | |
| " | " | Family Horses, | 33 00 | |
| " | " | Farm and Draft Horses, | 70 00 | |
| " | " | Colts, | 42 00 | |
| " | " | Sheep, | 16 00 | |
| " | " | Swine, | 5 00 | |
| " | " | Poultry, | 71 00 | |
| | | | | 546 00 |

FARM PRODUCE.

| | | | | |
|---|---|---|---|---|
| Amount awarded to | | Vegetables, | 71 00 | |
| " | " | Fruits, | 191 00 | |
| " | " | Flowers, | 23 00 | |
| " | " | Dairy, | 28 00 | |
| " | " | Bread, &c., | 22 50 | |
| " | " | Root Crops, | 48 00 | |
| " | " | Destruction of Canker Worms, | 40 00 | |
| " | " | Reports of Committees, | 24 00 | |
| " | " | All other objects, | 123 50 | |
| | | | | 571 00 |
| | | Total | | $1369 00 |

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# TRANSACTIONS

OF THE

# Essex Agricultural Society,

IN MASSACHUSETTS,

FOR THE YEAR 1873,

WITH THE

FIFTY-FIRST

ANNUAL ADDRESS,

BY

REV. CHARLES B. RICE,

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Published by Order of the Society.

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SALEM, MASS.:
OBSERVER STEAM PRINTING ESTABLISHMENT.
1873.

# ADDRESS.

*Mr. President, and Gentlemen of the Essex County Agricultural Society:*

It is pleasant for me to meet you here to-day not only for the interest which, as a citizen, I must feel in that most important branch of industry you represent, but on account also of many personal associations and memories connecting me with the pursuit you follow. My home in boyhood, and for years after that period had passed, was upon a farm. I have had practical acquaintance with the planning and labors, and have entered into all the habits and tastes that belong with a farmer's life. Our early impressions do not readily leave us; and there has been with me no wish that they should be removed. Being thus the son of a farmer, and having been a farmer, it is easy for me still to reckon myself as of the same calling with you. This habit is so strong as to put me into a kind of doubt sometimes for the forms of speech that should be used, since I might as naturally say "we farmers" as "you."

But this claim which I make to be in a manner one of yourselves, I fear I should poorly justify if I were to attempt to speak at length to-day upon the particular methods of the art in which you are engaged. There are few men that ever attain to fullness and thoroughness of knowledge in more than one of the several fields of occupation and study that are opened to us. Having, therefore, my own main employment

in these later years in another line, I could not expect to say anything worth your hearing with regard to either the special studies or the practical methods of Agriculture. I have come reluctantly to this conclusion, since some such directly and narrowly practical discussion would be most appropriate to the occasion, and since this Society has had, often, in former years, the good fortune to be so entertained; and since, too, withal, as I suppose, it is not easy for any of us to make confession of any lack of knowledge upon any subject whatever.

But though I can not do what would be best, I do not mean to leave off speaking altogether. Agriculture has not only its interior field, belonging to itself, but its relations also to what is around it. Thus one who for some time had not been within the enclosure, though he would not be able to advise as to the laying out and tilling of the field itself, might still have knowledge of the place where the land lies, of the approaches to it, and of the features of the surrounding country. It is to a little walking over these adjoining grounds that I purpose to-day to invite you.

One of the first questions that arises with respect to any pursuit is for the effect it has upon those that are engaged in it. Our occupations are not carried on for their own sakes, but for their human uses. We enter upon them that we may grow and be profited by them as men; or that other men may have benefit from them through us. Thus in agriculture there is *the farmer* above the farm. We look to see what the influence is of the *calling* on the *man;* and what powers it gives him over other men about him.

This matter is worth our special attention. We may give it the title: The Farm and the Farmer. Or, since we wish to know how one engaged in this pursuit is affected towards what is manly, we might call it: The Farmer and the Man.

The standing of the farmer, as a man, in his business, and by means of it,—this is what we are to consider. The relations of the farmer to society will also be involved; with the inquiries, what they are, and what opportunities and special strength may be afforded for them.

In the treatment of this subject, I have thought that some benefit might be had from my own former life upon a farm, and from that association with farmers in interest, taste and sympathy, as well as by personal intercourse, which I have never ceased to maintain.

The topic, too, it might be observed, is not far removed from the particular province of a preacher. There we are busied with the *culture of man*. And though we do not take all of that work as belonging directly to us, but only certain parts of it, yet we have some acquaintance with the whole ground, or ought to have. Our Master called some of the early preachers to be "fishers of men." If they had been tilling their fields when He spoke to them, He might probably have said "raisers up," "growers" of men. And He did speak of a "harvest" they were to gather in, of which the ears, the sheaves of grain, were men. Thus we are concerned in our profession in whatever has to do with this rearing and direction of manhood, which is, indeed, a matter of common interest with us all.

The first use of a farm as to the farmer is *to afford him a living*. The way in which it may be made to do this best belongs to that inner department upon which I am not to enter. But however it is done, the thing itself is fundamental. It is very important, too, it should be at once admitted, that the means of support drawn from the farm be abundant. Little progress of any kind is apt to be made where communities, or whole classes of men, are weighed down by utter poverty. Thus the peasantry in many countries of Europe, and of the East, are able, from one generation to another, to effect scarcely anything more than a bare continuance in life. It but seldom occurs with such a people, that there is any rising up even of single individuals above the low general level. The mass goes forward but slowly, if at all, and there is no shooting beyond it of personal resolution or genius. We know how different in this latter respect the condition of things is in our own country. The child of a poor man is likely enough to become rich, and the son of the most obscure farmer may have no

harder climbing to the Presidential chair than the son of the President himself. But there are no poor classes among us, and therefore, really, no cases of individual poverty. The man whom we call poor is able to educate his children, and there is open before them any position for which they may be fitted, with surrounding agencies assisting them towards it, rather than repelling them from it. The resources, that is, of the community in which he lives, are largely at his disposal, and he is *not*, therefore, poor.

A variety of causes have contributed to bring about, and are operating still to maintain, this state of hopefulness and thrift and measurable equality. The opening newly before us of a wide land has had its share. Favoring providences from the past have assisted. Our planting was of a stock distinguished and notably, at that time, for vigor and endurance, for strong personal independency, conjoined with a public spirit resolute and tenacious. Our civil institutions took a form in which these qualities found expression and exercise, and through which they have continued reproduction. Our social ideas and customs were drawn into a corresponding order, from which they have not, as yet, greatly removed. And all this has been done beneath the fashioning power of a religion set by all its precepts, and far more thoroughly and irremovably in all its fundamental truths and facts, for the recognition of brotherhood and the ordaining of justice and love among men.

The developing causes have been various, but the fact itself, near at hand, is this: that the great leading class of working men, by whom the soil is tilled, have never been and are not poor. They own the land. They live by it. They have resources. They keep their place with dignity and power in that general society which they largely constitute. They hold a due control over the institutions and the government which their fathers formed, and which in principle or in administration they themselves, and none without them, are able to change.

Labor in other departments has had its share; but this agricultural interest is great and fixed beyond any other. The

position which it has been able to maintain has had more immediately to do than anything else in the production and preservation of the openness, the elastic freedom and the equality of our American society. And reliance of the same sort must be had upon it in all the future.

Now we may not suppose that the ability of our farmers to keep the place they have so far held, depends solely on their resources in property. It rests, in part, on their own care and vigilance and determination, and some of the public duties to which they are thus called, we shall have occasion to notice. But the matter of property is of great account. And any considerable loss in this respect in the relative weight and power of the farming population of the country, would be productive of the most serious evils. If the tillers of the soil among us were, as a class, to be reduced to that poverty in which those of the same occupation are compelled to live in India, or even in France, there would speedily follow, even if these had not gone before, governmental and social changes, bringing us somewhat into the likeness of those nations of the old world.

For these public reasons it is to be desired that our agricultural population should ever be thrifty and prosperous. The possession of money has also its immediate personal advantages, proper to be valued and sought for. I hope, therefore, you are all rich! And, indeed, you are.

I do not forget that the average farmer must both work and calculate for his living. He earns his money, as a man ought to do. I think, too, that at the present time the pay he gets in money for his day's work is somewhat less than that of other working men, who are no more than his equals in diligence and skill. This, in fact, is well understood to be so, and the reasons and remedies for it have been of late much discussed. There has been a local cause in operation in the unequal terms upon which the New England farmer has attempted to compete in the growth of the great staples, with the new and more fertile West. But this in our own neighborhood, at least, has been in part removed by the turning of attention to those produc-

tions that can not be readily brought from a distance ; and it is further, even if it be not fully, counterbalanced by other advantages of nearness to market. Moreover, the farmers at the West are themselves now feeling the pressure, and are underpaid for their work. Their difficulty, as they think, is in want of cheap transportation to the seaboard. They are partly right, and so far there can and ought to be in that respect a remedy. But the distance and the cost of removal, from those great wheat and corn fields to the Western and still more to the Eastern shores of the Atlantic, will always be considerable ; and these farmers of the Mississippi will find the most thorough cure for their troubles not when they can slip easily to those far off markets, but when they have drawn the markets themselves to their doors.

But for the present state of things there is a simpler and more adequate interpretation. The agricultural interest is slightly depressed, temporarily, throughout the country. The reason is, as I think, chiefly that it is to some extent and temporarily overdone. It has been pushed, by the opening of these vast Western fields, more rapidly than other branches of industry, and yields in consequence smaller pay in comparison. It is only the great law of equalization in supply and demand bearing slightly and for a little time against us. But there is no occasion either for violent measures or for discouragement. The natural remedy will soon come. Few, perhaps none, will need to leave the business. Some temporary check will be put upon the bringing of new lands under culture. The trades and handicrafts will fill up, the country will grow, and there will be a demand for the fruits of the earth that will repay again the labors of the husbandman. The ship may be rolling a little upon one side now, but she will have her turn of rolling the other way ; or if her trim is not quite right, the sailing master will shift only a few bales and will not throw over the whole cargo. At all events we need not jump overboard ourselves.

Besides, even while we make this allowance that the farmer is at present relatively underpaid, it will not follow that the business is a poor one. It has its compensations of various sorts.

Some of them are in this line, too, of ultimate pecuniary advantage. There is its comparative freedom from the evil of sudden and sweeping losses. There are the opportunities always afforded upon a farm for the employment of time, so that none need be lost; the occasions for continual and permanent improvements, which tell in the end upon one's estate; the constant incitements to economy and thrift that belong with the possession and culture of land, which, taken together with other kindred habits of life they involve or favor, have made our farmers to be not relatively poor by any rule of measurement that can be found. In this matter of money they can stand against any other class. Let any other pursuit in which large numbers of men are engaged be taken. Make the comparison not with a part of these men, but for all, and for a lifetime with all, and the farmers will not be found the poorer. I do not except from this comparison the mercantile pursuits, nor what are called "the learned professions,"—saving only the ministry!

In this first great matter, then, of furnishing the means of living, the farm does not do poorly for the farmer unless it be when the farmer does poorly by his farm. It will give him more than a bare subsistence, and will afford him as much of resource and as fair a setting out in this respect toward manhood, as any other business would be likely to do. There will be need of work and of prudence, but there are necessities in all human life, and within their appropriate bounds are to be thought of as blessings and not grievances.

Passing, therefore, onward from this point, we may notice again that the farm affords to the farmer the peculiar advantages of *a permanent home and a fixed place of occupation.* Certain tendencies in this fixedness of place toward thrift, by the improvement of time and the investment of labor, have already been alluded to as bearing upon the pecuniary resources and gains of the farmer. Besides these there are influences from the same source acting directly on the man himself, and by means of which the farm may make the farmer to be more a man.

Our farmers, to be sure, are not fixed in their places of living, so but that there is much of removal among them. But there is less of change than with any other class of our population; and more of probability in the case of any individual that he will spend his life where he now is, and that his children after him will occupy the same homestead. And it is more likely, also, looking towards the past, that he himself is occupying the seat of his fathers. There is a value for him in such memories and prospects. The sentiments awakened by these associations with place are among the most refined of any of which our nature is susceptible. They remove us from ourselves. They connect us by ties of interest and thoughtfulness with those that have gone before, and with those that are coming after us. They are not narrow but broad in their reaching over space, though they begin upon a single spot. From the love of home and of neighborhood we pass to the love of country, and to some affectionate concern for all that belongs to the earth itself, the common home of our race.

It is not a small thing for the farmer that his business itself may bring directly upon him the culturing power of these associations. They ought to be much thought of and cherished. A man should thus put upon his farm some marks of himself that may remain upon it. A substantial and well planned building, or a work of fencing or drainage, may thus become a memorial of his ownership; or the setting out of a group of trees in some well chosen spot, adding to the attractiveness and perhaps also to the comfort of the place. Every one ought thus to aim to leave, if he can, some outward sign of good upon the earth for his living in it.

But setting aside sentiment, if any one wishes to do so, there is an advantage the farmer has from his permanent dwelling place in that he can see what he has done. This, at all events, is distinct and commonplace. If he works a little harder than usual one season and clears the rocks thoroughly out of one of his ploughed fields and lays them into a solid wall, his work is before him, and he can always see what he has done. The craftsman, on the other hand, or the trader, or the clerk, if he

has distinguished himself by any such unusual labor or earning, may be very likely to spend that money in hiring a horse or buying a new coat. Now I do not mean to speak disparagingly of either horse or coat, only it is certain that when both are gone they can neither of them be seen further, nor in that way enjoyed.

There is some motive, also, here toward economy and foresight and thrift with the farmer in his living permanently in the midst of his works. And these qualities are not now mentioned on account of what they bring to a man in possession outside of himself, but for what they bring within him, in that they make him to be sagacious, prudent and thrifty.

Then a man's permanent home tends to give him a marked character of his own. He lives by himself. He lives on his own land. He takes care of it himself; and does his own thinking and ordering about it, and has done so for years. He gets planted on that spot like a man with a standing place and foothold of his own. He comes to be a whole, distinct, established man by himself, with marks of his own upon him. Or whatever the occasion may be, of the fact itself I am sure, that there are more men of marked character and individuality and self-completeness in our agricultural districts than are to be found anywhere else, unless perhaps it may be among the men of the sea.

Then, too, though the farmer has a place of his own, yet he lives conspicuously among his neighbors. He knows them and they him. They have been long there together. A man's doings are observed, his habits noticed and remembered. Each name and family seat gets a character in the neighborhood. It is likely to be a better one for this continual observation and responsibility. Thus it is that the neighborly relations of farmers are apt to be pleasant and helpful. The exceptions will be conspicuous and disagreeable, no doubt, by the working of the same causes that make them rare.

And here I will say that I do not believe it to be true, as is often reported, that these agricultural districts are peculiarly infected with gossiping and scandal and a peering and vexatious

curiosity. I will not deny that our farmers' wives and daughters may possess and communicate knowledge reasonably, but I do affirm, and from much acquaintance with them, that they make habitually better use of their tongues than that person does of his, who calls them, as a class, lovers of scandal and gossip.

Besides giving him a good support in an established home and neighborhood, the farm offers to the farmer, further, the advantages of a *business primary and central in its nature and relations.*

The husbandman deals freshly and at first hands with nature, as no one else does. His main concern is with the great natural powers of the earth, the air and the light; and with those living forms which these powers sustain. He is brought near to that presiding Intelligence by which these agencies are ordained and controlled. There is a dignity upon him in this place where he stands. He is a child of the globe itself, upon which he lives: and more than any other his dependencies are removed from among men. In all this there ought to be, and is, some helpfulness towards sobriety and devoutness and manliness and courage.

There is a satisfaction, too, in the farmer's work of pure production. It is a fresh addition beneath his hand to what the world contains. There is a pleasure in the growth of a field of corn, beyond what its bare value in money could give. And this sense of satisfaction passes over upon the returns received. Almost every one, I think, must be aware of a certain difference between the worth of a hundred dollars the farmer has from the corn he raises and the like sum gained by its rise upon the trader's hands; though for his time and care and skill the trader also is a producer of value.

The business of the farmer is primary also in the matter of its standards of prices of labor and of production. With land at a moderate cost, the best rule for determining the average value of labor is the measure of what a man can earn in cultivating the soil. That is the great, leading occupation.

It is regulated on first principles. It has little that is fictitious or arbitrary about it. Let a man go at it and see what he can earn. The farmer being thus in this business knows ordinarily that he is getting for what he raises not far from what it is worth, that is, not far from what it can, in fact, be fairly raised for. I do not forget that the farmer's occupation, though relatively the most independent, is concerned, like every other, in the general welfare of society, and in the condition and management of all public affairs—a connection laying duties upon him which he can not safely neglect. Still the nature of his business, open and broad and primary as it is, and comparatively clear of artificial complications, does keep him free from much of that annoyance as to the price of his work, with vexation of mind and heart, which is felt in many other occupations, and for which it is not easy always to furnish a remedy.

The farmer works, too, for himself, with no employer or master, saving only those productive powers of nature acting upon his farm, which he studies and serves and uses. He can work thus when he pleases, and as many hours in the day as he pleases, and he neither needs nor will tolerate any meddling with him; and he makes his reckoning for what he does with these productive powers he serves. And beyond this he is answerable to no one, except for his accountability to the Author of nature and of man for the appropriate use of his capacities. There is a force for manly culture in this place he holds as to his time and work.

Further, this clear establishment of the standards of value has a tendency again, along with the other agencies already mentioned, toward habits of economy and prudence. The farmer knows, better than men in some other callings, what things cost by their true measurement in time and work. He is more likely to know how they should be taken care of, used or spent. This intelligence he has on this subject there is much need that he should impart to some other men.

Again, on this same ground, the peculiar, primary and fundamental quality of the farmer's business places him in good

relations with men of all other pursuits. All men are really interested in the prosperity of all other men in every legitimate employment. But it is not always easy to see it. As to the farmer it can generally be discovered. The workman of every craft, the manufacturer, the merchant, the clerk, has reason to be glad when this great labor of production prospers. It is true that the farmer may make some apparent or exceptional gain in years of scarcity by the higher prices he gets. But years of scarcity are not, on the whole, best for the farmer. His direct business is to bring into existence, of what man needs from the soil, the largest amount at the least cost. As he succeeds in this all others are profited. This is so far generally understood that men look favorably upon him in his calling, and recognize him as a common friend and helper. It is worth something for a man who values the highest things to be planted so in his business where he may be regarded as being, and may be, the friend and ally of all his fellow-men.

The farmer is thus permitted, in a peculiar manner, and required, to hold fraternal relations with the men of every other branch of industry. He is in the midst of them and before them all. He may be no narrow or clannish man, confining his interests and sympathies to those of his own or any other single occupation. He must hold out a hand to all.

This ease of affiliation between the farmer and the men of other employments is always to be noticed in our Agricultural Fairs, which are mechanical exhibitions almost as much, and to some extent commercial. And it has occurred to me also that our own county offers a peculiarly happy illustration of this fact in the prosperous establishment of its numerous and varied industries within what were at first, for the most part, agricultural communities. This multifariousness of pursuit within our county is indeed most remarkable, with the variety which it involves in modes of life, and the compass it gives to society among us. It may be believed that the like breadth and scope is not to be found upon the same extent of territory anywhere else in our State or in the country.

Essex County is historic. It is the second only in the period of its settlement, in Massachusetts and in New England,—or third, if we allow precedence to the beginning at Portsmouth. It has its historic centre, and has always had its men of historic spirit. It is scientific, with its institutions and men in that line of note. It is agricultural, as we know, with thoroughness and spirit among its farmers. It has been commercial, and preserves still the traditions of foreign traffic. It is manufacturing in wonderful variety. We can clothe a man in cotton and wool and linen, and jute if he chooses, of our own fashioning, and can put a hat on his head and shoes on his feet—having before that tanned his hides. We can then teach him theology, and something of patent medicines, and send him away in a railroad car or pleasure carriage made to his order, and ballasted, to steady his theology, with machinery for spinning, or weaving, or sewing, or threshing; or with stone to build a town. We have our quiet rural homes, our villages, our cities, not large, but many and making all the district populous, our residences for rest and pleasure along the sea, and then, characteristic and unique, beyond the land, and from off all our shores, these fishers, these husbandmen of the deep.

I can not now suffer this occasion to pass without mention of the blow that has lately fallen upon this interest of the fishermen, and upon this town in which we are assembled.* It has happened to me, in a former year, to have been here and in these neighboring towns, while tidings were hourly arriving from the scenes of a similar destruction; and I have heard thus before these sounds of simultaneous and general mourning. But this latest disaster, of but a month ago, is without example even in your experience. I bring you to-day, in behalf of these your brethren, the husbandmen of the land, our regrets at the misfortune that has befallen you in your business, and our deeper sympathy for the loss from your

* By the great storm of August 24th, eight fishing vessels, as is supposed at the time of this writing, were lost with their crews; three times as many more were stranded, or totally disabled. And the number of men in all that perished may not, it is feared, fall much short of one hundred and fifty.

homes of the men, the reapers of this perilous harvest of the sea, buried beneath the furrows, upon the fields they tilled. We wish for you the return of more prosperous years, and the care in your present troubles of the Greater Husbandman, who makes perfect often His choicest fruits under the shadows of clouds and tempest.

But again the farm does well by the farmer in giving him *an occupation full of variety*, with the benefit of frequent change in what he does. This is refreshing both to the body and the mind.

Many descriptions of mechanical and of mercantile work are monotonous. They are the same thing day by day, and year after year. They are carried on within doors and in the same room, with no change for storm or sunshine, or winter or spring. The farmer's occupation is all different. It is largely in the open air, which is itself healthful and exhilarating; and which brings him into the presence of all the variety of the sky and the fields. Then there are many kinds of work, and they change with the weather and the seasons. There is no other occupation in which there is so great a number and variety of things to be done, or in which the work depends so much upon the time of the year or the sort of a day it is abroad. Upon a large farm there are not far from thirty distinct classes of labor to be performed: and each of these may have many divisions of its own, as haymaking has, or the care of the farm stock in winter.

The work changes, too, with the shifting weather. It is not the same work for the clear and the cloudy day. In May, if it is too hot, the oxen must rest, and the lad plants his watermelons. If the east wind blows freshly in October, and the sky is hazy at the southwest, great loads of corn are brought in for husking while the storm lasts. A shower in July rallies all the help to save the dry hay. It is flung quickly upon the cart, to the music of the coming thunder. And there is a sharp eye, too, from the younger people, upon the neighbor's field, to see that ours is cleared the first by a few minutes.

The farmer's business brings him to notice the aspects of nature that are changing with every day, and for the different periods of the year. There is no one that keeps the time through all the year as the farmer does. His different employments return with the seasons and come to be associated with them. Everything that is peculiar in the year affects them. With an early spring the work comes soon and hurries all the hands. If it is a warm, wet summer, the hay goes up over the great beams to the ridgepole of the barn; and the boys have a tough time crowding it away under the rafters. The very dry and hot year shows itself upon the Indian corn, that loves the scorching sun. But if it is cool and only moderately dry, the potatoes are large and thick in the hill. A snow-storm in the first part of November brings home the young cattle and the sheep, to take their breakfast spread over the ground in the next field; for it is too early yet for their winter quarters.

The most ignoble and unsatisfactory of all pursuits is the driving of calves. It is appointed to this animal tribe to attain to the full command of its physical organs much earlier than it is able to appreciate the motives in accordance with which they should be directed; that is, as I suppose a German philosopher would say, before it has reached the polarization of its related consciousness: or, as it may be otherwise stated, the creature will run with the wind before he knows anything. After a long chase you have brought him to the bottom of the hill by the gate, and the rest of the cattle have gone through. You look upon them with a sense of relief and approbation as they walk decently along the road. It would have been better to have watched the calf. He springs off too suddenly to be stopped. His thin frame offers no resistance to the air, except that he is swayed a little aside into a gentle bend, like a sheet that moves upon its edge. It is the most hyperbolical and returnless of curves. He is across the ravine and over the ridge beyond. By good luck, however, you get past him at an angle of the fence, and he bears away for the gate, frightened and bellowing. The whole herd comes back to see what the

mischief is. There is hope that he may now be driven out with the others. Such a trust, however, has no firm ground in the nature of the young animal. He darts from among them and passes you with a long jump, when you are about three steps off. To any but a good boy the juncture will seem to call for forms of speech the use of which has been very properly forbidden us. The calf is vanishing along the line of rocks that lead to the most upper and northwest corner of the lot.

That calf must be let alone for a day or two; and at the end of that time I will tell any boy, that wishes to know it, of a better way for setting out to begin with in bringing home those calves from the lot.

The plays of the children, also, and the employments within doors of the housekeepers are affected almost as much by the changing of the seasons. One who has not tried it can not tell how great the difference is in these respects between life in the country and in a large town; or between that in a farmer's house and any other, even in the country. The farmer and his family are the only people that know how the promise has been kept, that seed-time and harvest, and cold and heat, and summer and winter, and day and night shall not cease.

There is a certain power of sympathy with nature that is rarely if ever possessed, except by one who has lived long in the midst of natural things, and had his home among them. Men and women of culture, and with a good eye and a good tongue, will come out into the country for an excursion of a few weeks, and they will tell a pleasant story of what they have seen, and write sparkling letters for the papers or the magazine. But if they were never anything more than city people, there will always be something wanting—a ground flavor, which a short lying only on the turf will not give. Nature herself is with them as a maiden may be with a lover that comes to woo her; she has many cheerful and sprightly things that she will say; but yet the ways that are most her own, her happiest and home-like life, she will show only to the family circle—the brothers and sisters who have grown up

with her from childhood—I speak of farmers' daughters. If there are any other young women whose habits as to strangers and the home people are such that they could not be made use of in this comparison, I have myself no knowledge of them.

The farmer's life, with all its variety, dependent upon the changes in the natural things with which he has to do, brings him thus into sympathy with nature herself, which is pleasing and refreshing. It may be true that many farmers do not take much notice of this. But there are those that do. And there is an influence from this source upon many even of those that have no care or thought of it.

I understand very well that a farmer's life is not altogether or mainly made up of poetry or any other kind of sentiment. But there are no lives that are. There is plain and hard work everywhere. But this I affirm, that the farmer has his work with more of interruption and variety in it than most men. And moreover that living upon the open face of nature and in the midst of all those scenes and appliances designed to refresh the sense and quicken the imagination, he may and does gain thus a benefit of this sort, for which, whether he always knows it or not, he owes thanks to his calling.

But further, the farm gives *the farmer a fair opportunity for mental culture.*

In the first place, the business of agriculture has its own requirements in intelligence, and they are not small. It offers opportunity to study in many ways in its own special line, and demands it in order to the highest success. You are familiar with the subject at this point, to which your attention is often directed, and I need not dwell upon it. Only I will observe that in so far as knowledge, of whatever sort, is in fact needed for the most successful prosecution of your work, in so far at least you have opportunity to gain it, since your business pays you for it.

Besides, agriculture has its special connections, somewhat outside of itself, that invite to thoughtfulness and knowledge. Some of these are legal in their nature. And there may be mentioned, as a specimen, the question often agitated in other

countries, and beginning to be raised and likely at some time to become prominent with us, concerning the tenure of land, and the extent, especially, of the right of private property in it. It is fundamental in your calling. The earth is given to the race of man. It belongs, subject only to necessary and reasonable limitations, equally to all. This premise of the socialist and the radical can not be overturned ; and it is not properly his alone, but it is in many ways involved in our public law. It is of importance, then, for the farmer living upon land he calls his own, to be able to show, as I think he can, that that mode of distribution of this common inheritance in the earth by which, subject to various limitations from powers reserved by the body of society, he is allowed to take and hold and transmit as his own a certain portion of land, is in accordance with natural justice, and is for the general good, and is practically that distribution by which, on the whole, every man, of every occupation, may receive the largest return from the productive powers of the earth, and may really enter most fully into his own share in its possession.*

* The abundance and cheapness of land in our country has thus far prevented any considerable discussion of this question. It will not be so indefinitely in the future. And it is time now that the true moral foundation of the legal right, as it exists among us, should be distinctly understood. Many persons would be inclined at first to deny that the earth belongs in substantial equality to all men. But that denial can not be maintained, and ought not to be. The true course is to admit that general ownership, and then, as intimated above, to make the issue upon the *manner of the apportionment.* It can then be made to appear that the interests of all men are really promoted by the existing arrangement.

Great numbers of men are not able to occupy for themselves any part of the soil of the earth, being busied with other pursuits. Their interest in it is to be able to buy most cheaply its products. This they can best do when each man tilling the soil is allowed to *own* the land he tills ; as experience and reason show. But this title of private ownership is by no means an absolute one. It is qualified first by the legal reservations held by the body of the community in the right of eminent domain—a right of far more extensive practical application than most people are aware of—appearing even in the matter of the power of taxation, and of the creation of a public debt, which becomes a lien on the land ; and secondly by the moral conditions of the case, which make the private owner really a kind of trustee for all mankind.

It is plain, too, that a man ought not to be allowed to own and hold, against occupation by those who would settle upon and till it, vast areas of land. It may be that there will be needed with us no legal provisions against this evil, beyond what are involved in the rules now existing with respect to the distribution of estates at the owners' death and the virtual prohibition of entails. But care should certainly be taken in this respect in the disposal of the public lands.

Reference might also be made to questions of taxation. I believe that a wrong has been done by the action of our legislature at its last session in raising the point of exemption for incomes from one thousand to two thousand dollars. The change has lessened perceptibly the amount of my own tax bill; but this does not enable me to see its justice. A man should pay taxes somewhat according to his ability, which his property may not always represent. The salaried man often spends money much more freely than the farmer. He can pay for the support of government somewhat in proportion to his spending in other directions. And the man who is prudent in his habits, and thus saves a little property, ought not for that reason to pay the whole tax of that one who chooses to spend all his income upon himself and his family—an income much greater it may be than the owner of the property has ever had. Certain men with salaries were no doubt in a position to get at the legislature and make a din in its ears. Perhaps it would be worth their while for the farmers to try what virtue there is in a little noise. At all events the matter is one to be thought of.

Besides these special connections of the farmer with public affairs, like those which have been mentioned, he has his broader relations as a man with the civil and religious institutions of society. These relations involve men of every other pursuit indeed. But they have some peculiar responsibilities for the farmer as belonging to the most fixed and permanent portion of the community. They are educational in their pressure upon him.

But furthermore, farming gives good opportunity for general mental culture. I know the difficulties that exist. But I know also that they are not insurmountable; and I can affirm from my own experience, that it is possible, without neglecting unduly the labors of a farm, to gain some not small amount of time for general reading and special study. The extent to which this can be done will vary with the seasons of the year, and it will require in any case calculation and resolution; but the time can be had.

The general statement, at all events, that our farmers have

good intellectual opportunities may have its quick and most decisive proof in the fact, that these farmers *are* intelligent men. The thing is, and it has therefore been brought to pass. Our agricultural population is intelligent, fully up to the standard of the general average, and as I think above it. There may be with them less of showy knowledge, but there is not less of that which is substantial.

Clearness of perception, a steady and firm judgment, a stout, solid, compacted, sensible understanding, these high mental qualities abound among them. It is well known with our preachers that a country congregation can be brought to follow a close and deep argument quite as well as a city audience. And I suspect a lawyer, if he were allowed to choose for himself a jury that he meant to blind and confuse and twist, (if a lawyer ever did mean to do such a thing,) would not go first of all to put into the box twelve farmers. The business may be known then, like a tree, by its fruits.

It may be said, however, that there are at least certain occupations that are, of their own quality, intellectual, and that agriculture must always appear at some disadvantage compared with these. The matter at this point is of importance enough to be looked at a little; since there are impressions of this sort in the minds of many persons, especially young people, operating unduly to the disparagement of agriculture, and having influence with some in the choice of their occupation for life.

It is granted that there are such distinctively intellectual pursuits. But not all are of this class that are sometimes thought to be. We must object, therefore, in the first place, to the spreading of that name over wide fields of employment, or idleness, to which it does not belong. Then the distinctively intellectual callings are few in comparison and limited in capacity. It is well that they should be entered by those that have special fitness for them; but they will not hold great numbers of men. Further, those that are in them, while they get more of mental exercise and growth in particular directions, are not by any means always made to be stronger men

than others of equal natural endowment in a different line of life.

There is the broad question, besides, running under all this ground, as to the degree of merely intellectual development that is, on the whole, desirable with man. Some strong physical basis is needed. What proportions of mental and of bodily exercise and development are required for the highest efficiency of life in a single person, is not settled. For a whole community or race the question has far more of complication, and no one can tell how it may yet be solved. Unbalanced mental development weakens the stock of life. It is written in nature that man shall not live alone by schooling. There are those in our day that should study the writing. A general eagerness, therefore, for intellectual pursuits, while full of promise, might have also its elements of danger for a people; especially if joined with a distaste for manual labors. The following too far such a mode of life, besides its other difficulties, is open to this serious embarrassment, that a people could not live to pursue it. And when we consider the leading place which agriculture holds, by the appointment of nature, among all occupations, we may perhaps conclude that that admixture which it requires or allows of bodily and mental exercise is near to the proportion that will be found on the whole and for most persons to be best.

And again the end of life is not in intellectual growth alone, even if there were no checks upon it. It is in capacity to act strongly and well. Goodness enters into it, and power of will towards that. The best life is that which is most intelligently and forcibly directed towards good. These other elements the man of studious life may sometimes miss. The man of labor may gain them, and stand before him by any measure of strength and valuable accomplishment. The farmer has much to help him do it. His business in this respect brings him as near to the due balance of life, it may be, as any.

Books are not all. And moreover for the most of wisdom they have, one does not need a vast multitude of them to find it. There is a popular delusion on this point, which the

intelligent farmer should not share. He may know that the most of what is best lies within his reach ; so that he need not be hindered from arriving at large attainments if he has the mind for it. He has the great Book which, besides its one chief aim, has proved itself in its quickening power on the mind, a book of Life. Passing beyond this he can surely find means to establish himself well in history, which is the basis of all general culture. He may grasp the outlines of the natural sciences ; and may follow out somewhat any for which he has a liking. Then there is a range of special studies, with books of reference in great numbers useful for those that pursue them, but for others possible to be dispensed with. But beyond these, and of that which for general purposes is more needful, for range of thought, for power and beauty in speech, for elevation and refinement of mind, the really great masters in all ages and tongues are but few. In philosophy, poetry and oratory their names may be spoken almost in a single breath. He is wisest who is most with these. Of books in these departments you need but few. If you know the masters, it is of little account that you are not acquainted with all the pupils. Saving for special study, your authors may be less in number than twenty rather than more than forty. And though you do not have all, even of the best, a few may still suffice.

These appliances for growth and culture lie within the young farmer's reach. He need not vex his soul, or reckon himself an underling, if he does not read all the books that are written, old, or even new. If he has on his table a joint of beef and good bread, with milk and vegetables and a basket of peaches, he can live without maccaroni and frog and mushrooms. The lighter literature of the day need not be set wholly aside ; but if one will make his main diet of it, he will spoil shortly both his taste and his digestion.

I repeat it, therefore, the opportunities of the young farmer in this respect are not poor. He can buy the books he really needs. The money the clerk, his neighbor's son, spends for cigars will pay for them. He can find time to read them. Part of it he can take by leaving the evening gathering at the

village store. His mind need not be ill furnished. And he may gain, if he will, a solid and even an elegant culture.

Whether, therefore, we look at the general average of mental power as actually existing among our agricultural men, or at the possibilities that are open for higher attainment, we must conclude that the farm does well in this respect by the farmer.

And the business thus, as we have seen, supports him, planted permanently and centrally with regard to men of other pursuits, with variety in his work, with space in it for mental culture and with many special occasions throughout for growth in strength and wisdom.

It is evident that you farmers ought to be and are remarkable men! And I hope you know it.

*It follows that you ought to put yourselves forth with power upon the society in which you live.* Let me press upon you this practical conclusion. It may be that as a class you lack something in this particular. You are to be depended upon generally to stand in your places, and to stand, mostly, for what is sound and true. But you do not always move quickly enough to go out and attack what is false and evil. You are conservative and cautious; it comes in part of your occupation, and you bear sometimes too much. It is not in your profession to make a noise, and you make sometimes too little.

Open then your lips more freely to denounce the follies and wrongs you yourselves despise. Put forth your hands more frequently and strongly to control the destinies of the nation of which you form so important a part.

You need to have some *care* to do this. Your life is more quiet. You are on your farms. You are less frequently than some others in the places of public resort. Your habits of mind have come somewhat to correspond. Other more bustling and noisy men, if you do not mind, will appear to be shaping public sentiment and directing public affairs, and shortly to be thinking themselves to be the public.

It should be with you a perpetual concern to maintain that weight in the community to which you are fairly entitled, and

to give your constant and powerful support to those principles of sobriety and of wholesome and upright living, which you yourselves should have formed.

There are counsels appropriate to the men of your occupation in all times. In pressing them, therefore, upon your attention to-day I shall incur no risk of giving offence to any, as if only narrow and invidious applications were intended;—a thing as distasteful to me as it would be contrary to all the proprieties of this occasion. There is nothing to be said in which patriotic men of every party and association may not fully concur.

That there is a tendency among us to recklessness and extravagance in expenditure and to an ostentatious style of living, that there is an undue haste to be rich, or a distempered anxiety to gain the means of gratifying expensive tastes, that there is with many an unscrupulousness as to the methods to be taken for acquiring money, that these practices have affected the public service, so that frauds abound and the suspicion or the reality of corruption is on every hand, that these evils have increased of late, and worst of all, that we are in danger of becoming accustomed to them, so that they will be endured with too much of patience; this it may be presumed no one will deny.

It would be strange, too, if these mischievous personal habits into which many men in public and private life have fallen did not, to some degree, infect the management of distinctively political affairs. Yet it is not true that we have fallen upon the worst of times in this respect. Nor need we believe, as I do not, that the leading political men of our day are sinners above all that have gone in their places before them, or above all other men. But at all times the temptation is strong to an overheated and unscrupulous pressing of partisan ends; and men are apt to lose sight in their zeal of the fact that the public interest they propose to serve involves the rights and welfare of the members of every opposing party as well as their own. This goes, so far, to strike at the fundamental idea of republicanism in government, which is that of a *commonwealth for all.*

For all these mischiefs, whether old or new, it is the duty of every citizen to assist in searching out and applying a remedy. A responsibility rests upon you, farmers, as belonging to the most numerous and to the leading class in our population. Your knowledge also of the worth of money and your general habits of prudence and economy give you peculiar ability to interpose with effect in checking the course of private and public extravagance. The maintenance of a wholesome simplicity in living rests peculiarly upon you, and the powerful requirement of exactness and fidelity in every public trust.

The nature of your pursuit, and the wide and helpful relations it holds with others on every side, give you also opportunity to assert often with effect the great truth of a common interest between all men of every party and class. You ought, therefore, to stand up for charity, for fairness, for the most exact and scrupulous and considerate regard for the rights of every one of your fellow citizens. And these things you ought to do promptly, boldly, firmly, persistently, stoutly and effectively, now and always, that the Republic may live and its enemies perish.

You should choose more of your own number to public office, though there ought to be in this no narrowness of action. There are men, farmers, in our own county and throughout the land, of integrity, of breadth and solidity of character, of capacity for the ordering of affairs, amply qualifying them for the responsible posts of government. More of them should be there.

I have endeavored thus to magnify your calling as farmers, which is indeed honorable and full of opportunity beyond what I have been able to set forth. I congratulate you upon all the evidences of thrift which your yearly exhibitions afford. You are prosperous here. Your former neighbors of the same avocation are entering on the great West; and they will hold and control those imperial lands. Your calling will not fall from respect and power. I doubt not you will continue to respect it yourselves, and will enter into all its good.

It is to be hoped, too, that your sons may, many of them, follow it after you. It is a promising beginning of life.

Set your boy out heartily upon it. Teach him to honor God, to obey his father and mother, to be courteous to his sisters, and to love his country. Let him learn to spend his evenings at home, and to choose to do it. Train him carefully, but not hardly, in his work; and let him never come to despise work with his hands. Have him put spirit and life in it, so that he may become a quicker and better workman than any of the men you can hire. Let him early learn responsibility, and grow to be watchful and systematic and prompt. See that of his own mind his hoe is always bright and his cart under cover. Give him a good chance at the schools. Ground him in history. Strengthen him with Blackstone and the Federalist and Kent; and let him walk, in the winter nights, with the kings of letters and song. Teach him to hate a lie, to scorn dishonor in others, or in himself. Have him to be careful for his own rights, but chiefly as part of the rights of all. Make him more mindful of a caucus than of his daily bread. Let him be early and resolute and patient at a town meeting; helpful in all neighborhood undertakings; more anxious to be useful than to be thought so; and understanding that to serve his country does not signify to be served himself of her and fed at her hand. Let him be builded thus clear and broad and sound, strong with the integrity and backbone and pluck of his fathers, trustworthy, trustworthy in every grain of his life, a great, solid, upright, steadfast man.

When he is grown up and these things are well established upon him, let us know of this boy of yours, and after we have sent him to Congress we will make him Governor and President.

# THE CATTLE SHOW AND FAIR.

The Fifty-Third Annual Exhibition was held at Gloucester, Sept. 23d and 24th, 1873.

The following entries were made:

| | | |
|---|---|---|
| Horses and colts, | 55 | animals. |
| Cattle—working oxen, bulls, fat cattle, milch cows, heifers, &c., | 90 | " |
| Sheep and swine, | 24 | " |
| Poultry, | 110 | coops. |
| Agricultural implements, | 7 | entries. |
| Ploughing teams, | 11 | teams. |
| Carriages, | 3 | entries. |
| Articles manufactured from leather, | 5 | " |
| Bread, honey, &c., | 51 | " |
| Butter, | 5 | " |
| Flowers, | 42 | " |
| Counterpanes, &c., | 100 | " |
| Fancy work, | 137 | " |
| Manufactures and general merchandise, | 22 | " |
| Grapes, peaches, &c., | 40 | " |
| Apples, | 52 | " 213 pl'ts |
| Pears, | 89 | " 450 " |
| Assorted fruit, &c., | 8 | " |

CHAS. P. PRESTON, Secretary.

# REPORTS, &c.

## FAT CATTLE.

There were but two Fat Cattle entered for premium, those by T. G. Ordway, of West Newbury. For his off ox the Committee award the first premium, the Society's diploma and $10; for his near ox, the second premium of $8.

*Committee*—Jas. P. King, A. H. Gould, John Bray, Joseph Akerman, J. Z. Gordon.

### STATEMENT OF THOMAS G. ORDWAY.

To the Committee on Fat Cattle:—These cattle I purchased the middle of March. They have done all my work—ploughing, drawing manure, getting in hay—filled barn ninety five feet long—and all other work required of oxen on a farm. Have worked them considerable on the highway. I gave them hay and five quarts meal, each, per day until the 25th of May, then turned them out to grass; have not had meal since.

## BULLS.

The Committee on Bulls award the following premiums:

Two-years-old and upward, thorough-bred Jersey, first premium, diploma and $10, to G. W. Herrick, Gloucester, for bull "Rebel."

Second premium, $5, to Geo. W. Kittredge, North Andover, for bull "Prince."

Two-years-old and upward, thorough-bred Short-Horns, first premium, diploma and $10, to Geo. W. Duncan, Haverhill, for bull "Champion"—three years old, weight 1680 pounds.

Under two years old, thorough-bred Jersey, first premium, $5, to Geo. A. Abbott, Andover, for bull "Victor."

There were eight entries in all, but the above premiums were the only ones, under the rules of our Society, that could be awarded. When will exhibitors understand that they "are required to give a written statement of pedigree," and that the judges cannot receive a bull as thorough-bred simply because that word is prefixed? It would be well for competitors to remember this, if they expect premiums.

This rule, if adhered to, will, in the course of years, do more for the encouragement of breeding good stock than it is possible for our Society to do in any other way. That there is sound reason for this rule hardly any one at the present time would care to dispute. Merely to strengthen our position, I shall quote from a little book, entitled "Cattle and Cattle Breeders," by William M'Combie, M. P., a breeder of many years' experience, one who bred for profit; and also from the writings of the "Northern Farmer," published in the Farmer's Magazine for 1870. The former says—"Pedigree is of the most vital importance. We ought always to prefer a bull of high pedigree, with fair symmetry and quality, to another bull, though much superior in appearance but of questionable pedigree." "Breeders have not given the subject the attention it deserves. I have paid dearly for my experience in the matter."

The latter says—"The surprising influence for good which the male of pure descent, of whatever the breed, exercises on the quality and character of the future offspring being now well understood, no effort should be spared to procure purely-bred bulls, and on no consideration should a cross-bred animal be used. The extra price is not worth a thought, as by the time the progeny of the pure-bred bull have reached the age of twelve months, they will have paid not only the difference between the pure and the cross, but the entire value of their sire, and that without extra feed and attention."

Farmers are apt to breed in a haphazard, careless sort of way, and if luck favors, now and then get something they call pretty nice. Successful breeding requires the closest study.

Darwin writes with much truth—"Not one man in a thousand has accuracy of eye and judgment sufficient to become an eminent breeder. If gifted with these qualities, and he studies the subject for years, and devotes his lifetime to it with indomitable perseverance, he will succeed and make great improvements; and if he wants any of these qualities, he will assuredly fail."

But you say, if not thus gifted, shall I give up breeding altogether? No, assuredly not. Strive to learn some of the great principles of breeding, learn from the experience of other breeders, take up their results and go on; and though you may not become eminent, you may do much good and make many improvements in your time and generation.

As an example of an eminent breeder the late Thomas Bates stands out prominently. At the sale of Charles Colling's short-horn cattle in 1810, Mr. B. purchased "Young Duchess," for 183 guineas. This, with another cow previously bought, was the foundation of the celebrated Duchess tribe, one of which, "the 8th Duchess of Geneva," at the auction sale at New York Mills last month, sold for the enormous sum of $40,600, and will soon be on her way to England. At the same time, "the 2d Duke of Oneida" brought $12,000; one hundred and eight head averaged $3,523.

At Colling's sale, "Comet," the highest priced animal on the ground, sold for one thousand guineas, and forty-seven animals averaged a little more than one hundred and forty-two guineas.

There must be something in pedigree and blood when cattle sell readily at such prices. Grand results these, no haphazard breeding here; but the closest study and attention down the line of breeders from Colling to Walcott and Campbell.

The maxim, "penny wise and pound foolish," is never more fully verified in any business than in stock raising. It is the poorest policy in the world to buy stock animals simply because cheap. If you wish to raise stock to sell, or merely to breed for your own pleasure, get the best at any reasonable price. If you do not, after years of patient waiting, you will regret,

when perhaps too late to remedy your mistake, that spirit of false economy which persuaded you to purchase mediocre animals. *Cæteris paribus*, of course the cheapest are the best.

If a breeder wishes to make his mark and see success in his own lifetime, he must be content to learn from the example and experience of his predecessors and contemporaries. Life is rarely long enough for a man to start out and establish a breed, although he may make vast improvements in existing breeds, and place many stones in the stairway which leads towards the summit of perfection.

Breeding is a science. The field for experiment is boundless; but only such men as Darwin mentions can reap a full harvest, although many may receive adequate and even satisfactory returns for the labor and expense incurred. Let us look at some of the principles of breeding as laid down by Prof. James Law, which should receive the serious attention of every one who desires to be a successful breeder.

The laws of variation, he says, are quite as important to study as the laws of hereditary transmission, for without variations improvements would be impossible. Among the causes of variation are mentioned food, climate, soil, use, disuse, reversion or breeding back, prepotency, imagination of the mother, the influence of a former pregnancy, disease and accident. One can easily see the influence of food by noticing the difference between two herds of the same breed, the one kept by a generous, the other by a niggardly, feeder. High feeding, Prof. L. says, tends directly to variation and improvement.

Climate and soil have a marked influence on a race of cattle, which will be evident in its effects long after a removal to a dissimilar location. For this reason, we should be careful to select only such animals as are adapted to the climate and soil of our own farms. On this subject, the "Northern Farmer" writes,—"It is highly necessary to take into consideration the class of animals that will suit the farm, it being much better to get them of a size rather under than over the capabilities of the soil, as in that case improvement will begin at once;

whereas, if the opposite has been the case, the stock must recede.

"A man possessed of large capital can easily place on his land animals of immense bone and substance, and of the most approved breeds, but he cannot so easily alter the character of his soil and make it fit to carry such cattle; that must be a work of time, however great may be expenditure with the view of improvement; and consequently it becomes good, sound policy to keep both stock and soil progressing in the same ratio."

In selecting a breed of cattle, we should choose that which has been bred in a country as similar as possible to our own in climate, soil and in its natural features.

*Use and disuse of parts.* Cows in a wild state yield very little milk, and if our cows are not milked regularly and completely, the quantity of milk will decrease, or may cease altogether, whereas by the constant and proper use of the udder the flow of milk is continued. Cows that are worked, as often happens on the continent of Europe, acquire in time stouter limbs and a heavier appearance than if kept for simple milch purposes. Swiss cattle are remarkably coarse and heavy limbed for their size, in consequence of their almost daily efforts in climbing the steep mountain sides.

Atavism, reversion or breeding back, is a subject of great importance and a proper understanding of it indispensable for the breeder. Darwin mentions many curious cases of reversion. He crossed a Black Spanish cock with a white silk hen; one of the offspring was almost exactly like the wild Gallus bankiva. Another experiment is mentioned, in which some West Highland cows were crossed with purely-bred short-horn bulls. The cows were of a red color, and the bulls red, red and white, or dark roan. A considerable number of the calves were white, or white with red ears, and he says, it is highly probable that here the offspring reverted, in consequence of the cross, to the color either of the aboriginal parent species, or of some ancient and half wild parent breed.

The same author writes,—"As a general rule, crossed

offspring in the first generation are nearly intermediate between their parents; but the grandchildren and succeeding generations continually revert, in greater or less degree, to one or both of their progenitors."

"With cross breeds, the act of crossing in itself certainly leads to the recovery of long lost characters, as well as of those derived from either parent-form."

In speaking of latent characters he observes,—"we can thus understand how, for instance, it is possible for a good milking cow to transmit her good qualities through her male offspring to future generations; for we may confidently believe that these qualities are present, though latent, in the males of each generation."

Agassiz has stated that "Children are not only the children of their father and mother, but they are the children of their grandfathers and grandmothers; they are the children of the generations preceding them, so much so that it is a well established fact that very often children resemble their grandparents more than they resemble their parents."

Thus we see the importance of a good pedigree and the value of a pure-bred ancestry. In my own experience, a case of apparent reversion has occurred in breeding Essex swine, although I had good authority for believing that all my animals were descended from perfectly pure-bred stock, yet in a litter of eight pigs one was white with black spots, the others were entirely black. As the improved Essex is supposed to have some infusion of Chinese blood, this would seem a probable instance of breeding back to the black and white Chinese hog.

Prepotency is a subject which should receive the careful consideration of every farmer who, although not a breeder of thorough-breds, is a raiser of stock. On this point Law expresses his views so well that I shall quote liberally. "Prepotency is less frequently the prerogative of the individual than of the breed which has been bred long and carefully to a particular type. Hence the great value of short-horns and other pure races in imparting to other breeds, with which they may be crossed, their own qualities to a proportionately greater

extent than the share they have had in begetting them." "Crossing a pure, well fixed breed with one whose characters are less fixed and constant will bring the impure breed very quickly to the standard of the pure, and this will be a change for the better or the worse, according as this pure breed excels or comes below the other in personal qualities. Thus breeding our common cows with a poor aboriginal race of any country will *deteriorate* them rapidly, while crossing them with Short-Horn, Ayrshires, or Dutch, will with equal rapidity *improve* them. Again, crossing of these improved breeds with a poor but strongly fixed and prepotent breed will be at the risk of obtaining a reversion to a more primitive and still poorer type of the race. Crossing thus becomes an art, whose principles must be studied and acted on in order to succeed."

There are many well authenticated cases where the imagination of the mother seems to have left its impression on the offspring. It is related, on authority of Col. Bryant, Fairhaven, that a number of black cows, sent to an island, had by accident a dun steer introduced among them, and that their calves were without exception of a dun color. Other instances of the same kind, especially among the lower animals, might be mentioned.

The effect of the first pregnancy on succeeding ones is a principle supported on the authority of Agassiz and others, and by many well known instances which confirm their statements. I have noticed particularly in breeding dogs that the first pregnancy has had a most noticeable influence on after progeny. This should be a warning to careful breeders not to allow their heifers to have connection with any but superior bulls.

Youatt, in speaking of disease, says there is scarcely a malady to which the horse is subject which is not hereditary. If this is true of the equine, it can hardly fail to apply in some degree to the bovine, species. Seeing that hereditary evil qualities may be transmitted with almost as great facility as good qualities, we cannot be too cautious in selecting for breeding only animals of good health and vigor.

Malformations and injuries from accident are closely allied to disease, and are governed by the same laws, though not invariably so. Law mentions the case of a cow having her horn knocked off, which afterwards had three calves hornless on the same side of the head.

Interbreeding is a subject of no little importance. Mr. Bates' views were these, that "to breed in and in from a bad stock was ruin and devastation, yet that the practice may be safely followed, within certain limits, when the parents so related are descended from first rate animals." For thirteen years this celebrated breeder of Short-Horns bred closely in and in, but during the next seventeen years, thrice introduced fresh blood into his herd.

Nathusius, a careful observer and a breeder himself, writes, "from study and his own experience, he concludes that close interbreeding is necessary to ennoble the stock; but that in effecting this the greatest care is necessary, on account of the tendency to infertility and weakness."

Darwin declares that there is high authority for asserting that many more calves are born cripples from Short-Horns than from other less closely interbred races of cattle.

Thus I have presented, in a very incomplete way, (for pages might be filled on every subject mentioned,) some of the axioms of good breeding, theories they may be called by some; but unless they can be disproved by equally well founded arguments, must be accepted by the fair-minded. At any rate, they present a vast field for research, inquiry and experiment, which every wise breeder will enter into with the determination of strengthening or weakening the principles laid down.

I have in this article quoted largely from authorities, whose opinions based on careful observations and experiments, will, I think, carry more weight and awaken more thought than any simple essay on the subject.

J. D. W. FRENCH, Chairman.

North Andover, October 10th, 1873.

STATEMENT OF GEORGE A. ABBOTT.

The thorough-bred Jersey bull *Victor* owned by George A. Abbott of Andover, and entered by him for premium, was dropped May 1, 1872, by the imported cow Jenny, then and now owned by Wm. H. Plummer of Brighton, and consequently is now little over sixteen months old. He was sired by the thorough-bred bull *Tom*, now owned by Dr. Augustus Mason of Brighton. Tom's pedigree is sire *Duke of Cambridge* (imported), Herd Book, page 24; dam Cora (imported), Herd Book, page 262.

STATEMENT OF GEORGE W. DUNCAN.

HAVERHILL, Sept. 22d, 1873.

CHAIRMAN OF COMMITTEE ON BULLS:

DEAR SIR:—The bull named "*Champion*" I enter for premium is a thorough-bred Short-Horn, three years old last May 25th, and weighs 1680 pounds.

I purchased the cow that dropped this bull from a friend in western New York, a raiser of cattle, who said "she was with calf from his thorough-bred bull."

The cow was a full blood Short-Horn, I owned two years. It was an unusually promising calf. I raised it and have owned and kept him for cows at my Buttonwood farm.

In three cases in this city he has got twins, that have lived and are doing well;—J. B. Spiller, a member of this Society, R. P. Cushman and a gentleman from West Parish.

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## MILCH COWS.

The Committee on Milch Cows award the premiums as follows:

JERSEYS.

Samuel E. Sawyer, Gloucester, for Jersey cow, Fannie, first premium, $10, and diploma.

GRADES.

Joseph Andrews, Essex, grade Jersey, first premium, $15, and diploma.

G. W. Herrick, Gloucester, second premium, "Beauty," $10.

Geo. M. Wonson, Gloucester, third premium, "Perfection," $5.

*For the Committee*—John L. Shorey.

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## HERD OF MILCH COWS.

The Committee on Herds of Milch Cows, report that there were two entries for premiums, and that both were from Gloucester. Mr. Geo. M. Wonson exhibited a herd of six cows, and Mr. G. W. Herrick a herd of nine. The premiums were awarded as follows:

To G. W. Herrick of Gloucester, first premium, $15, and diploma.

To Geo. M. Wonson of Gloucester, second premium, $10.

The Committee regarded the statement of Mr. Wonson as barely explicit enough to bring his herd within the rules of the Society, inasmuch as it failed to give a clear statement of the yield of his herd, based upon actual measurements.

In consideration, however, of the quality of his stock, and the evident intention to comply with the prescribed regulations, they felt justified in awarding him a premium.

All of which is respectfully submitted.

*Committee*—Jos. S. Howe, Chas. Perley, Horace C. Ware, Geo. H. Haskell, Albert Titcomb.

STATEMENT OF G. W. HERRICK.

GLOUCESTER, Sept. 20, 1873.

*To the Committee on herds of Milch Cows.*

I enter for premium a herd of nine milch cows. I give their mess for the first ten days after their calves are taken from them, and the last ten days in August. Calves are taken from

the cows at four days of age. In regard to feeding and general management of my cows, I would say that I feed them regularly, night and morning, on salt and English hay, and some roots, with four to six quarts of meal and shorts per day. Watered twice every day and groomed every morning. This is my treatment, from the time they come to the barn in the Fall until they are turned into the pasture in the Spring. Their feed, since turned into pasture, has been common pasturage, with four quarts of meal and shorts per day, and green fodder in its season.

| | *First* 10 *days after calving.* | *Last* 10 *days in August.* | *Average.* |
|---|---|---|---|
| Brunette, calved Mar 4, 1873. | 16 qts. per day. | 11 qts. per day. | 13½ qts. per day. |
| Cora, " Mar. 21, 1873. | 16 " " | 10 " " | 13 " " |
| Maud, " April 1, 1873. | 20 " " | 12 " " | 16 " " |
| Pride, " April 7, 1873. | 16 " " | 13 " " | 14½ " " |
| Dora, " May 15, 1873. | 23 " " | 11 " " | 17 " " |
| Lydia, " June 30, 1873. | 16 " " | 9 " " | 12½ " " |
| Emma, " July 1, 1873. | 15 " " | 12 " " | 13½ " " |
| Nellie, " July 28, 1873. | 19 " " | 18 " " | 18½ " " |
| Jennie, " Aug. 7, 1873. | 14 " " | 12 " " | 13 " " |

STATEMENT OF GEORGE M. WONSON.

EAST GLOUCESTER, Sept. 23, 1873.

Entered by Geo. M. Wonson, one herd of six cows, two of them dry, to calve next month. Four of them, with fair feed, will give over twenty quarts of milk per day. The other two are two and three year old heifers, promising to make good cows. Their feed is one quart of meal and two quarts of coarse shorts, morning and night. Also, a small armful of green corn fodder, each night since the 25th of July. The pasturing is very poor. I think the four cows will average fifteen quarts of milk per day, through the season.

## HEIFERS.

The Committee on Heifers have attended to their duty, and submit the following report, viz. :

Thirteen entries were made, representing twenty-two animals. Of thoroughbreds under four years of age, in milk, there were no entries. On Grade or Natives, under four years of age, in milk, there were four entries ; and we award to G. W. Herrick, of Gloucester, the first premium of $10, and to Geo. M. Wonson, of Gloucester, the second premium of $5.

Of Thoroughbreds, one year old and upwards, that have never calved, there were ten entries, and we award the following premiums, viz. :

AYRSHIRES.

First premium to Aaron Knowlton, of Essex, $5.

JERSEYS.

First premium to Jefferson Coolidge, of Gloucester, $5.

Second premium to Geo. M. Wonson, of Gloucester, $3.

Of grade or natives, one year old and upwards, that have never calved, there were five entries ; and we award to D. Harrison Porter, of Hamilton, the first premium of $5, and to G. W. Herrick, of Gloucester, the second premium of $3. Of thoroughbred Heifer Calves, under one year of age, there was only one entered ; and we award to Samuel E. Sawyer, of Gloucester, the first premium of $4, for his Jersey calf " Sweetheart." Of grades or natives under one year of age, there were two entries. And we award to David Bennison, of Gloucester, the first premium of $4, and to Geo. Collins, of Gloucester, the second premium of $2.

There were several other animals which the Committee deem worthy of special notice, among which may be mentioned three Jerseys owned by Francis Dane, of Hamilton, two, owned by Samuel E. Sawyer, of Gloucester, one, owned by Eben Dale, of Gloucester ; but after close examination and careful consideration of all the animals entered for our inspection, we have thought it just and proper to make the awards of premiums as above stated.

*Committee*—John H. Cheever, Romulus Jaques, Isaac F. Knowlton.

## WORKING OXEN AND STEERS.

The Committee on Working Oxen report seven pairs entered, six of which competed for the premiums, and award as follows:—

First premium, to Thomas Haskell, of West Gloucester, diploma and $12.

Second premium, to Gardner W. Herrick, of West Gloucester, $10.

Third premium, to Thomas W. Hazeltine, of Bradford, $8.

Steers—none entered.

Special premium by Hon. George B. Loring to best teamster of oxen or steers, $10, awarded to Joshua Roberts, of West Gloucester.

*Committee*—Alden C. Estes, S. E. Noyes, J. P. Goodale.

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## TOWN TEAMS.

The Committee on Town Teams report one team of four horses owned by George Collins, of Gloucester, which they consider fully entitled to a premium, and award $12.50; and also award $12.50 for the finely decorated car containing the May party, drawn by said horses. They were somewhat disappointed to find but three pairs of oxen, that they could call a Town Team.

Parties having single pairs of oxen on the grounds, belonging in different towns, kindly offered them to assist to draw the beautifully decorated car prepared for the procession, for which they have our thanks. The Committee award to the town team of three yokes of oxen from Gloucester $12.50, and also award $12.50 for the decoration of the car, containing nine young ladies representing the products of the seasons, &c., of which a more extended report will be made for publication in the transactions of the Society.

*For the Committee*—Thomas P. Gentlee.

Sept. 23d, 1873.

## STEERS.

The Committee on Steers report only four pairs entered for premium, two pairs of two-year-old, and two pairs of yearlings.

The steers entered by George W. Kittredge, both two-year-old and yearlings, were well broken to the yoke, and were worthy of notice. These steers were taken from the pens, and put with the ox team which made up part of the procession, which moved through many of the streets of the city, his yearlings acting as leaders of that team, and attracted particular attention (perhaps not so much as the young ladies who crowded the agricultural car drawn by that team) for the remarkable, gentle manner in which they performed their part in the procession, doing it much better than many old oxen would have performed the same thing.

The Committee feel it their duty to award for yearlings, the first premium of $4 to George W. Kittredge, of No. Andover.

Second premium of $3, to Geo. W. Herrick, of Gloucester.

For two-year-old, first premium of $5, to George W. Kittredge, of North Andover.

Second premium of $4, to George James, of Gloucester.

*Committee*—Abel Stickney, S. B. Swan, George W. Sanborn, James Nason, Richard Ward.

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## STALLIONS.

The Committee on Stallions respectfully make the following report.

In the class of four years old and upwards were three entries: William Cogswell, Bradford, "King William;" George A. Rogers, Salem, "Jim Fiske"; Francis Dane, Hamilton, "Young Morrill."

First premium, $15 and diploma, to G. W. Rogers, Salem, for "Jim Fiske."

Second premium, $10, to Wm. Cogswell, Bradford, for "King William."

Third premium, $8, to Francis Dane, Hamilton, for "Young Morrill."

Class of three years old and upwards, first premium of $8, to Thomas Sawyer, of Boxford, for "Napoleon."

S. C. Oliver, *Chairman.*

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## BROOD MARES.

The Committee on Brood Mares respectfully report the following awards:—

After some looking about your Committee found upon the fair grounds four mares, three of them having colts by their sides. Entries as follows: Benjamin P. Ware, of Marblehead; Abijah P. Fuller, of North Andover; John B. Hodgkins, of Rockport; W. H. Knowlton, of Rockport.

At the pen of the mare "Kate," entered by Mr. B. P. Ware of Marblehead, we found her in charge of his son, who gave us all the information we desired in relation to her, also a written statement from Mr. Ware. We found her to be a good, medium sized, young and sound animal, adapted to both the road and the farm, six years old, weighing (by Mr. Ware's statement) ten hundred pounds. The colt is four months and sixteen days old, quite large of its size, well built and perfectly kind and gentle, and has every appearance of making a good horse.

The second horse examined by your Committee was a bay mare belonging to Mr. Abijah P. Fuller, of North Andover, who had her in charge and promptly gave us all the information desired. This was a very fine animal, well built, smooth limbs and joints, perfectly sound and kind, and we should judge by her movements that she was a remarkably good traveller. The colt by her side is two months old, a perfect beauty, well built, good size, and every way a promising colt. We saw nothing objectionable about the mare except her age, which, by her movements, looks and actions, does not injure

her in the least, although we would not recommend breeding from mares at eighteen years of age or upwards.

The third horse examined was a black mare, with a colt by her side, belonging to John B. Hodgkins, of Rockport. We found no owner or any one in charge of her. The mare is a very pretty bodied animal and well built, except her hind legs, which we found to be badly out of order. And according to the rules of the Society we were unable to award a premium.

The fourth horse examined was shown, by a card on the pen, to be a mare belonging to W. H. Knowlton, of Rockport, a very fine looking animal, and had she been entered as a family horse we have no doubt that a premium might have been awarded her.

After a careful examination your Committee make the following awards:

To Benjamin P. Ware, of Marblehead, for his mare "Kate," the first premium of diploma and $15.

The second premium of $10, to Abijah P. Fuller, of North Andover, for his bay mare.

We suppose the object of the Society in offering premiums for brood mares, is for the special purpose of improving our stock of horses, and, in order to do that, great care should be used in the selection of mares for breeding purposes. There certainly is no kind of an animal where greater care is necessary in their selection than the brood mare, not only that she is free from all unsoundness, but that she is well built, honest, kind and free from all tricks. Size, symmetry and soundness are mostly to be regarded in the mare:—"blood from the sire, beauty from the dam," is the golden rule. Until greater care is used in the selection of the sire, as well as the dam, our markets will be supplied with inferior horses, a great many of them unfit for use. As the horse is one of the most useful and noble animals upon the globe, we feel that too much cannot be said in his praise. And we are pleased to know that men in our midst of high rank and culture, standing at the head of society, can say a good word for that noble animal, the horse, not afraid to take him by the head and exhibit him at a horse

fair, certainly such a man is entitled to the word *reverend.* The day of progress has truly dawned upon us, and the time for improvements in horses is at hand. We hope in future there may be at our annual shows a greater exhibition of brood mares, as they make one of the most attractive departments of the show.

*Committee*—A. B. Fellows, Frank Alley, Eben King, A. T. Newhall, F. R. Allen.

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## FAMILY HORSES.

The Committee on Family Horses report, that there were eight entered for premium, ranging from five to twenty-two years of age, and from eight to twelve hundred pounds weight, and award the first premium of $15 and diploma, to C. C. Cressy, of Gloucester, for his bay mare, six years old.

Second premium of $10, to Charles Davis, of Rockport, for his brown horse, five years old.

Third premium of $8, to Samuel E. Sawyer, of Gloucester, for his bay mare, seven years old.

*Committee*—Benjamin P. Ware, C. H. Gould, H. A. Stiles, John Bradstreet.

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## FARM AND DRAFT HORSES.

The Committee on Farm and Draft Horses report:

The first premium of diploma and $12, to Aaron Knowlton, of Essex.

The second of $10, to Samuel Dane, of Hamilton.

The third premium of $8, to S. F. Newman, of Newbury.

The fourth premium of $5, to Willard Smith, of Essex.

The special premium for best teamster of horses offered by

Dr. George B. Loring, of $10, they award to Edward F. Knowlton of Essex.

*Committee*—Horace Ware, Francis Dodge, C. C. Blunt, M. A. Shackley, David Smith.

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## COLTS—FIRST CLASS.

### FOUR YEAR OLD COLTS.

There were only two entries. The Committee award first premium to C. C. Cressy, Gloucester.

Second premium to Thomas Sawyer, Boxford.

### THREE YEARS OLD.

First premium to Thomas Sawyer, Boxford.

Second premium to J. J. Manning, Rockport.

*Committee*—Y. G. Hurd, G. W. Rogers, J. Augustus Savory, Benjamin Haskell.

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## COLTS—SECOND CLASS.

The Committee award as follows:

### TWO YEARS OLD.

To Herbert Sargent, of Gloucester, first premium, $6.

To Francis S. Lovett, of Beverly, second premium, $2.

### YEARLINGS.

To Charles S. Kennison, of Byfield, first premium, $6.

To Frederick Norwood, of Gloucester, second premium, $2.

*Committee*—A. M. Bodwell, C. H. Little, J. B. Spiller, G. C. Ruggles.

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## SWINE.

Three entries of swine were made.

### BREEDING SOWS.

W. A. Dane, of Hamilton, first premium, diploma and $8. No other entitled to a premium.

*Submitted by*—Henry W. Foster.

## SHEEP.

The Committee on Sheep report the first premium for Cotswold breeding ewes, to Francis Dane, of Hamilton, diploma and $8; for lambs, first premium, $3; for ram, first premium, $6.

*Committee*—D. M. Tewksbury, I. M. Woodbury, R. Ward.

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## POULTRY—FIRST CLASS.

The Committee on Poultry, first class, unanimously make the following awards:

LIGHT BRAHMAS.

Ordway Brothers, first premium.
J. W. Plouff, second premium.

DARK BRAHMAS.

Windsor M. Ward, first premium.
Ordway Brothers, second premium.
I. W. Kimball, gratuity, $1.

BUFF COCHINS.

Ordway Brothers, first premium.
Andrew P. Lufkin, second premium.
T. P. Hale, gratuity, $1.

PARTRIDGE COCHINS.

Ordway Brothers, first premium.
Charles A. Marr, second premium.
Windsor M. Ward, gratuity, $1.

BLACK COCHINS.

Ordway Brothers, first premium.
I. W. Kimball, second premium.

DUCKS.

Bennet Griffin, first premium.

WHITE BRAHMAS.

Ordway Brothers, gratuity, $1.

BEST COLLECTION.

Ordway Brothers, diploma.

J. M. Currier, Amesbury, large and choice collection, gratuity, $15.

R. G. W. Foster, Amesbury, 5 coops cochins, gratuity, $5.

*For the Committee*—J. C. Underhill.

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## POULTRY—SECOND CLASS.

*List of Premiums.*

PLYMOUTH ROCKS.

| | |
|---|---|
| First premium, Ordway Brothers, West Newbury, | $3 00 |
| Second " " " " | 2 00 |

DOMINIQUES.

| | |
|---|---|
| First premium, Ordway Brothers, | 3 00 |
| Second premium, J. B. Smith, Newburyport, | 2 00 |

LEGHORNS.

| | |
|---|---|
| First premium, E. A. Page, Swampscott, | 3 00 |
| Socond premium, W. M. Ward, Peabody, | 2 00 |

BLACK SPANISH.

| | |
|---|---|
| First premium, C. P. Barrett, Gloucester, | 2 00 |

GAME.

| | |
|---|---|
| First premium, Edward F. Hoyt, Gloucester, | 2 00 |

GOLDEN SEABRIGHT BANTAMS.

| | |
|---|---|
| First premium, Samuel Sylvester, Gloucester, | 2 00 |
| Second premium, I. W. Kimball, Hamilton, | 1 00 |

HOUDANS.

| | |
|---|---|
| Gratuity, Ordway Brothers, | 1 00 |

DOMINIQUE LEGHORNS.

| | |
|---|---|
| Gratuity, Aaron Low, Essex, | 2 00 |

BOLTON GREYS.

| | |
|---|---|
| Gratuity, Ordway Brothers, | 1 00 |

BROWN LEGHORNS.

Gratuity, Ordway Brothers, - - - - - - 1 00

*Committee*—James Flint, Robert G. Buxton, Charles B. Cogswell.

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## PLOUGHING—DOUBLE TEAMS.

The Committee award the first premium to Joseph Horton, of Ipswich, $12 and diploma.

The second premium of $10, to Dennen and James, of Gloucester.

The third premium, to G. W. Herrick, of Gloucester.

*For the Committee*—Wm. R. Putnam.

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## PLOUGHING—SINGLE TEAMS.

The Committee on ploughing with single ox teams report that the only entry was by Dennin and James.

The ploughing was very good and in the opinion of the Committee was worthy of the first premium. The Huzzey plough was used.

*Committee*—C. K. Ordway, R. S. Bray, A. P. Johnson.

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## PLOUGHING—WITH HORSES.

The Committee appointed by the Society for the purpose of awarding premiums on ploughing with horses have attended to that duty, and beg leave to make the following awards:

Teams entered and presented: Sylvester Dane, of Hamilton; Curtis C. Cressy, of Gloucester; Edward H. Brown, of Gloucester; Albert Titcomb, of Rowley.

Your Committee were unanimous in the following awards:

To Sylvester Dane, of Hamilton, the first premium of diploma and $12. Plough, Eagle, No. 73½; time, 30 minutes.

The second premium of $10, to Albert Titcomb, of Rowley. Plough, Huzzey, No. 16; time, 40 minutes.

The third premium of $8, to Edward H. Brown, of Gloucester. Plough, Belcher & Taylor, No. 61; time, 32 minutes.

The fourth premium of $6, to Curtis C. Cressy, of Gloucester. Time, 33 minutes.

The Loring premium of $10, for best teamster, to Oscar Littlefield, of Rowley.

The land selected for ploughing was rather uneven and sideling, very dry and gravelly. It has never before been our good fortune to witness such noble horse teams for ploughing, the uniformity in their size, their movements and work. They performed the work assigned them with apparent ease in ploughing the sixth of an acre, in an average of thirty-five minutes, with the exception of Mr. C. C. Cressy's team. Owing to his using a plough not suitable for a pair of horses, he could not avoid ploughing his land eight inches in depth, cutting a furrow sixteen inches wide. We think the plough he used would have answered the purpose for four or six oxen, and no doubt good work could have been done.

It is very important that a suitable plough should be selected for a pair of horses. We have no doubt had Mr. Cressy had a good and suitable plough he would have taken a larger premium. It is just as important that we have good ploughs, as that we have good horses for ploughing.

The history of the cast iron plough cannot be otherwise than interesting. About the year 1720, Joseph Foljamble, of Rotherham, England, received the first patent upon record for a plough. No doubt it was a great improvement upon those previously used. Again, about the year 1740, James Small, of Berwickshire, Scotland, invented the first cast iron mould board, and they were manufactured by him for fifty years, still using the wrought iron share. In 1785, Robert Ransom, of Ipswich, England, first applied cast iron for that purpose. Charles Newbold, of Burlington, N. J., made the first cast iron plough

in America. He received his first patent 17th of June, 1797. Although great improvements had been made upon the old wooden ploughs, so great were the prejudices against them, that many people believed that cast iron poisoned the ground and retarded the growth of crops; and after the inventor had expended $30,000 to get his plough into general use, he was obliged to give up his business and leave the American farmers to use their old wooden ploughs. The most ancient plough we have any record of, was a crooked stick, somewhat improved afterwards by being sharpened with iron. The Hindoo and even some in this country use a plough but little in advance at the present day. The Chinese use a similar plough at the present time, and in continental Europe, France, and some other countries, no better ploughs are used at the present day. Very little progress or improvements were made in the manufacture of the plough until within the present century.

Good ploughing is the first requisite to the growth of good crops. "Deep ploughing saves manuring." One of the greatest errors of the New England farmers is shallow ploughing. We hope in future no premium will be offered for ploughing six inches in depth, but that it may be changed to not less than seven inches.

*Committee*—A. B. Fellows, Levi Emery, M. H. Poor.

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## PLOUGHING—SWIVEL PLOUGH.

The Committee on Ploughing with Swivel Plough have attended to the duty assigned them. There were but two competitors, T. G. Ordway, West Newbury, and Wm. Foster, North Andover.

We respectfully award the first premium to William Foster, $12 and diploma, for his Holbrook plough.

Unfortunately, T. G. Ordway had a new plough from Ames Plough Co.; not working very well, he withdrew from the field.

We hope in future to see more of the Swivel ploughs on the field. This Committee think favorably of that plough to pulverize our New England soils.

*Committee*—S. A. Merrill, B. S. Barnes, James T. Carlton, Samuel Dane, Isaac F. Knowlton.

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## PLOUGHING—BY BOYS.

Special premiums by the President for ploughing by boys. There was but one entry, by Willie Merrill, of West Newbury, and your Committee award him the first premium, $25.

*Committee*—D. Bradstreet, Josiah Newhall, Daniel G. Todd, Hermon Phelps.

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## AGRICULTURAL IMPLEMENTS.

The display of goods entered in the class of Agricultural Implements was not quite so large as usual at our fairs.

There were ten different exhibitors, but no one of them made any considerable number of entries. In the list for which specified premiums are offered, there was only one entry; possibly this list might be enlarged with advantage.

The Committee were all present, with the exception of Mr. Griffin, of Glouceseer, who being an exhibitor declined to act.

The premium of $15, for largest and best display, was not given, but the amount, with the $20 placed at the disposal of the Committee, was awarded for such articles, as were considered of established merit.

The following is the list of entries and the awards of the Committee:—

| Bennet Griffin, Gloucester, | Gratuities. |
|---|---|
| 1 "Hollingsworth's" Patent Rake, - - - | $3 00 |
| 1 "Bullard Hay Tedder," diploma and - - - | 5 00 |

1 each, "Ames Steel" and "Hussey Cast" Plows, - 3 00
1 "Randall" Harrow, 1st prem., diploma and - - 5 00
Hay Fork, - - - - - - - - - 1 00
John Atkinson, Gloucester, Hand-made wagon and cart wheels, - - - - - - - - 3 00
Whittemore Bros., Boston, 2 Side Hill Plows, 1 Hay Cutter and 1 "Doe" Plow, - - - - - 3 00
1 Vegetable Cutter, $2 00; Wheel Jack $1 00 - - 3 00
Frank Burnham, Ipswich, Hay wagon, covered seat, diploma and - - - - - - - - 3 00
1 set Sled Shoes - - - - - - - - 5 00
Reed and Bowen, Boston, Foot Power Wood Sawing Machine, diploma.
Greenwood and Bassett, Haverhill, Washing Machine, 2 00

Among the novelties attracting general attention, there was in Mr. Griffin's collection an old fashioned wooden mould-board plow 100 years old; side by side with this stood one of the Ames Co's beautifully finished steel plows, showing at a glance the progress made in the art of plow making; however, for cultivating the rocky land of Cape Ann, it may be questioned whether the modern implement can do more service than the old one has performed in its day.

The covered seat for hay wagons, shown by Mr. Burnham, is probably as creditable an improvement as was examined by the Committee. It seems to make the market hay wagon almost perfect. The idea of a covered seat is by no means new, but its perfect adaptation for this special purpose is understood to be due to Mr. Burnham.

The sled shoes of Mr. Burnham are a device principally designed to prevent the sled from slipping sidewise. The shoe is made of cast-iron and steel. There is a slot running the whole length of the shoe, through which a plate of steel is made adjustable, very much in principle like a centre-board to a boat. Of course we could give no trial. The testimony of several persons who had seen its operation was favorable, and the Committee awarded a gratuity.

The "Warrior" mower is comparatively a new recruit, but

looks like a veteran of service. We think it was shown for the first time at our fair. It ought to fight successfully all mowing machine patent combinations; for such a system of wheels and gearing was probably never before seen or heard of. Its inventor must have had visions similar to those of the old prophet Ezekiel, for he has embodied herein the "wheel in the midst of a wheel," and "one that turns not as it goes." The machine appears to be well made and reasonable in price, and will probably take a place with first class mowers.

The "Wood" mower, shown by Mr. Fellows, is one of the best machines in the market. The leading characteristics of this are lightness and simplicity. In these it has always been unrivalled. There are several machines that in some features have advantages over this, but these points of excellence are often made at the expense of complication. The machine has been improved during the past season in several minor points, hardly to be noticed except by those who have used them.

Immediately after the plowing match a trial was had of the "Randall" and "Worcester" Harrows. The trial resulted so favorably to the former that the Committee gave it a premium without dissent. The Randall Harrow is in principle something like the "Nishwitz," which has been in use in the county for several years. Its price, $30, seems too high,—but the Worcester Harrow is held at $65—placing it out of the reach of farmers, whatever its merits may be. It may be described as suspended from wheels by chains and levers, and as perfectly under the control of the driver as a wheel rake. It is very portable, and comfortable for the operator. It is claimed that the draft, in proportion to the work done, is much lighter than other harrows, also that it runs more steadily.

The devices for heading barrels, &c., by Griffin & Smith, of Ipswich, could not be found by the Committee.

The Committee understood that the entries of Mr. Lummus were transferred to Mr. Griffin, and the awards for same were made to Mr. Griffin.

Respectfully,

A. H. PATCH.

Hamilton, October, 1873.

## CARRIAGES.

The Committee award as follows :—

To James B. Richardson for phæton, box buggy, &c., diploma and $15.

To J. M. Currier for business wagon, $10.

*Committee*—W. Ordway, Aaron Sawyer.

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## DAIRY.

The Committee on the Dairy report :—

The number of entries was small and of butter alone. With them were the following statements :

No. 1. 12 lbs. butter, the product of one native cow, from 8 days' milking, entered by Mrs. Sarah P. Burnham, Essex, Mass.

### STATEMENT OF MRS. MEHITABLE FOSTER.

No. 2. The 16 lbs. of September butter that I herewith send in a square box done up in pound lumps, is a specimen of the butter made this season from the cow, half Jersey and half Ayrshire, now seven years old, that we have owned for four years past—having made from her, year before last, 205 lbs., and having averaged this year more butter per week than then. Her feed has been common pasturing, and 2 quarts of Indian meal, and 2 quarts of shorts per day during the season.

Process of making—Milk each morning and night, strain the milk into tin pans, and let it stand till fit to strain, according to weather. The cream is kept in an earthen pot till it is churned, which is once a week. It is seldom that cold water is used in working the butter in the churns, as we have no trouble from the butter coming soft. It is worked over by hand directly it is taken from the churn, to get out the butter-milk, and then it is salted. The next day it is worked over again and made into pound lumps for market, averaging 40 cents per pound.

Hamilton, Sept. 23, 1873.

STATEMENT OF SARAH L. RIDGEWAY.

No. 3. To the Committee on Dairy:—I enter for premium fifteen pounds of September butter, made in the following manner:

The milk was strained into well scalded tin pans and allowed to stand thirty-six hours, then skimmed into tin pails and stirred at every skimming. As soon as churned the butter was rinsed in cold water and salted to the taste with rock salt, worked twice and formed as presented.

West Newbury, Sept. 23, 1873.

STATEMENT OF MRS. FARNHAM STILES.

No. 4. To the Committee on Dairy:—I enter for premium fifteen pounds of September butter, made in the following manner:

The milk is strained into tin pans, and placed in a well-ventilated dairy room to remain from 24 hours to 36 hours. The cream is then removed into a stone jar and stirred twice a day. Before churning it should be brought to a temperature of about 62 degrees. The butter is then taken from the churn and the buttermilk thoroughly worked out with the hands, and salted with $1\frac{1}{4}$ ounces to the pound. After remaining 24 hours, it is worked again and made into lumps as presented.

The Committee award the following premiums, viz.:—

To Mrs. Farnham Stiles, Middleton, first premium.

To Mrs. Sarah L. Ridgeway, W. Newbury, second premium.

To Mrs. Mehitable Foster, Hamilton, third premium.

To Mrs. Sarah P. Burnham of Essex, for 12 pounds of butter made from one cow in eight days, the amount not being that required by the rules of the society, but the quality being good, the Committee awarded gratuity of $3.

*Chairman*—George B. Loring.

## BREAD AND HONEY.

Your Committee were pleased to see so fine specimens of Bread exhibited this year. In household economy the making of good bread is a subject of much interest. Hence a lady at the head of a family, who cooks herself or by servants, should be an adept in this matter.

Your Committee, after carefully testing the several specimens of bread exhibited, would unanimously award the following gratuities, viz.:—

To Mrs. Addison Witham, of Gloucester, - - $2 00
" " Olivia Proctor, of Gloucester, - - - 2 00
" " L. D. Sawyer, of Amesbury, - - - 2 00
" Mary P. Bartlett, of Rockport, - - - - 1 00
" Mrs. Isaac A. P. Steele, of Gloucester, - - 1 00
" " N. E. Ladd, of Groveland, - - - - 1 00
" " J. W. Wheeler, of Annisquam, - - - 1 00
" " C. A. Alley, of Wenham, - - - - 1 00

### CAKE AND PIES.

Miss Annie Laura McEachran, Gloucester, for sponge cake, - - - - - - - - - 50
Miss Hattie Fall, of Gloucester, for sponge cake, - - 50
Mrs Edwin Lane, of Gloucester, for lemon pie, - 50

### CANNED FRUIT.

Mrs. Abbie Dodge, of Gloucester, 10 jars preserves - 50
Mrs. David Plummer, " 6 " " - 50
Mrs. Isaac A. P. Steele, " 7 " " - 50
Mrs. Charles Boardman, 4 jars of preserves, - - 50
Mrs. H. M. Hilliard, 4 jars of preserves, - - - 50

### HONEY.

To H. Alley, of Wenham, 12 jars of honey and 12 boxes of honey in comb, - - - - - - 5 00

*For the Committee*—T. B. Fall.

## FRUIT—FOR THE BEST COLLECTION.

### APPLETON PREMIUM.

The Committee appointed to award the special premiums offered by Mr. Francis H. Appleton for the best collections of fruit—would award the first premium of $15 to Benj. P. Ware of Marblehead, and the second of $10 to Peter Wait of Danvers. Mr. Appleton, in offering these premiums, has expressed his own belief in fruit raising, and shown his desire that it shall be entered into *intelligently*, and after thorough investigation. He does not offer a premium for the *largest* collection, but for the *best*—the best varieties as well as the best specimens. It is a mistake often made by beginners, that of getting too many varieties,—and those not adapted to their own soil and locality—of consulting books and fruit catalogues, more than their practical neighbors, who have for years made fruit-growing a profitable business. For instance: a man in Marblehead might wish to put a portion of his farm into an orchard, thinking to grow fruit for the market. His soil, perhaps a strong, clay loam, he would find after consulting with his neighbors, was very well adapted to the pear; and he could easily ascertain what varieties were the most profitable in his own immediate neighborhood; also the best mode of culture, etc. Another man in Methuen, on a different soil, and removed from the sea air, might find other varieties succeeded better with him. Some 12 or 14 years ago, we planted about 75 pear trees upon our farm—25 of these were Bartlett—the others, two of a kind of those most highly recommended, from the earliest to the latest. This year they all bore bountifully, and as they could not be used in the family, a large part were sold in our nearest market. The Bartletts in their season (and we let them hang upon the trees as long as possible) sold readily at $10 per barrel. The others were sold in small lots as they ripened, and with difficulty brought $1 50 and $2 per bushel—even such varieties as Belle Lucrative, Flemish Beauty and Urbaniste. Had there been enough to have made it an object, they would have brought more; but aside from the trouble of marketing so many sorts, had the trees all been Bartletts, the fruit would

have brought, at least, $100 more the present season. Perhaps for a term of years, other varieties might be as profitable as the Bartlett, but for *profit* in all kinds of fruit raising, we would recommend that a *specialty* be made of a very few varieties. Of course, the case would be different with the person who desires a succession of fruit through the whole season for family use, or with the amateur who expects to show his hundreds of varieties at the exhibitions.

So with apples; if any one, who has cheap land, is satisfied that it will pay to plant apple trees, or to take care of those already planted, will it not be wiser to plant the Baldwin and Hubbardston, than to try all the varieties recommended in a N. Y. catalogue?

Several persons, back a few miles in New Hampshire, have proved that *peaches* can be raised profitably in this vicinity. The one who has been the most successful, had seven acres planted in 1857, upon the top of a hill, on what could be called "pine land"—a sandy or gravelly loam. He believes peaches can be raised with as much certainty as any fruit, if planted on such land—high—above the "frost line." His trees have borne regularly, nine years out of ten, and the fruit has brought him $4 to $6 per bushel at his nearest depot. Those who have noticed the price of "selected peaches" in Boston market, for the last few years, can judge whether such a crop will "pay."

So with strawberries. One person in our immediate vicinity, has made a specialty of the Wilson strawberry, having some four or five acres devoted to it, and has cleared enough in one year to buy a small farm.

But these cases do not happen by chance; they are the result of careful, thorough investigation, and above all, perseverance. He, who after planting his orchard or garden, falters or gets discouraged, because of a few canker-worms, borers, mildew or drought, is *unworthy* of the fruits which a bountiful Providence would bestow upon us.

*Committee*—T. C. Thurlow, G. W. Gage, John A. Rogers, O. S. Bailey, James Wilson.

## PEARS.

First premium pears, as per book, $2 each, as follows:

Bartlett, B. F. Stanley, Newburyport; Belle Lucrative, J. C. Calef, Newburyport; Beurre Bosc, Peter Wait, Danvers; Clapp's Favorite, Addison Gilbert, Gloucester; Onondaga, Luther D. Pettingell, Salem; Seckel, B. F. Stanley, Newburyport; Buffum, F. P. Andrews, Essex; Winter Nelis, Thomas Capers, Newburyport; Vicar of Winkfield, Thomas Capers, Newburyport; Lawrence, B. F. Stanley, Newburyport; Louise Bonne and Beurre Clairgeau, A. J. Hubbard, Peabody; Golden Beurre, Peter Wait, Danvers; Duchesse d'Angouleme, B. F. Stanley, Newburyport; Urbaniste, Peter Wait, Danvers; Sheldon, B. F. Stanley, Newburyport; Beurre d'Anjou, A. J. Hubbard, Peabody; Paradise d'Automne, B. P. Ware, Marblehead; Marie Louise, Peter Wait, Danvers.

### SINGLE DISHES—$1 EACH.

Uvedales St. Germaine, David Smith, Rockport; Andrews, W. B. Parsons, Rockport; Doyenne Boussock, T. P. Thurlow; Howell, Peter Wait, Danvers; Fulton, William B. Parsons, Rockport.

Best twenty varieties, diploma and $5, A. J. Hubbard, Peabody.

Best ten varieties, $3, B. P. Ware, Marblehead.

Best plate of pears (Bartlett), B. P. Ware, Marblehead, $5.

### GRATUITIES.

| | |
|---|---|
| Mrs. S. W. Brown, for Doyenne Boussock, | 50 |
| D. G. Todd, for Sheldon, | 50 |
| W. H. Haskell, collection, | 1 00 |
| Charles Gardner, for Louise Bonne de Jersey, | 50 |
| W. B. Parsons, collection, | 1 00 |
| T. C. Thurlow, collection, | 1 00 |
| C. B. Barrett, collection, | 1 00 |
| G. B. Glover, for Beurre Clairgeau, | 50 |
| D. G. Todd, for Beurre Clairgeau, | 50 |
| Peter Wait, for Lawrence, | 50 |
| J. C. Calef, for Belle Lucrative, | 50 |

G. P. Rust, for Bartlett, - - - - - - - 50
Mary G. Lambert, for Duchesse, - - - - - - 50
Charles Hodgkins, for Flemish Beauty, - - - 50
Warren Jones, for Flemish Beauty, - - - - 50
H. G. Sanford, for Sheldon, - - - - - - 50
Bennett Griffin, " - - - - - - - 50
Asa Tarr, " - - - - - - 50
John S. E. Rogers, for Bartlett, - - - - - 50
John W. Marshall, " - - - - - 50
J. J. Babson, " - - - - - - - 50
John W. Marshall, for Tyson, - - - - - 50

*Committee*—Andrew Lackey, John M. Ives, Wm. H. Mears.

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## APPLES.

The Committee chosen to examine the different varieties of Apples make the following report:

Best collection twenty varieties, Benj. P. Ware, of Marblehead, diploma and $5.

Best collection of ten varieties, Wm. B. Parsons, Rockport, $3.

Best plate of apples, G. H. Shepherd, Gloucester, diploma and $5.

Best twelve specimens of the following varieties:

Baldwins, W. B. Parsons, Rockport, - - - $2 00
Porters, T. C. Thurlow, West Newbury, - - - 2 00
Pickman Pippin, Benj. P. Ware, Marblehead, - - 2 00
Roxbury Russetts, " " - - 2 00
Hubbardston, Thomas K. Leach, Topsfield, - - 2 00
Danvers Winter Sweet, Wm. B. Parsons, Rockport, - 2 00
Seaver's Sweet, Benj. P. Ware, Marblehead, - - 2 00
Gravenstein, H. Alley, Wenham, - - - - 2 00
Minister, Peter Wait, Danvers, - - - - 2 00
Sweet Baldwin, George Cogswell, - - - - 2 00
R. I. Greening, Thomas G. Ordway, Newbury, - 2 00
Drap d'Or, F. D. Winter, Gloucester, - - - - 2 00

Lady Sweeting, Benj. Hodgkins, Riverdale, - - 2 00
Lady Apple, Charles J. Peabody, Topsfield, - - 1 00
Garden, Peter Wait, Danvers, - - - - - 1 00
Kilham Hill, John S. E. Rogers, Gloucester, - - 1 00
Northern Spy, Wm. W. Perkins, Newbury, - - 1 00
Codlin, J. W. Wheeler, Annisquam, - - - - 1 00
Javetts Red, Asa Tarr, Rockport, - - - - 1 00
French Honey Pink, Wm. H. Haskell, Gloucester, - 1 00
King of Thompkins County, " " - 1 00
Pearmain Russett, Benj. P. Ware, - - - - 1 00
Liscom, H. Alley, Wenham, - - - - - 1 00
Blue Pearmain, Elias Andrews, Essex, - - - 1 00
Hall's Flat, D. Plummer, Newbury, - - - - 1 00
New York Pippin, Joseph Horton, Ipswich, - - 1 00
Fall Sweet, B. Stanwood, Gloucester, - - - 1 00
Grimes Golden, C. P. Barrett, Gloucester, - - - 1 00
Moody Apple, Wm. W. Perkins, Newbury, - - 1 00
Alexander, David Parkhurst, Manchester, - - - 1 00

The following contributors were awarded gratuities of 50 cents each:

Joseph A. Moore, Gloucester; Wm. W. Perkins, Newbury; Peter Wait, Danvers; Levi Denning, Lanesville; L. D. Nash, Gloucester; B. Stanwood, Gloucester; Benj. H. Smith, Rockport; John F. Burnham, Essex; John Story, Essex; Samuel L. Young, Lanesville; D. Bradstreet, Topsfield; Luther Allen, Manchester; David Parkhurst, Gloucester; Mrs. Eliza Elwell, Gloucester; Mrs. Henry P. Davis, Gloucester; A. E. Price, Gloucester; Miss Tucker, Gloucester; J. C. Calef, Gloucester; Moses Barrett, Gloucester; Wm. Babson, Gloucester: James F. Story, Essex; G. A. Lane, Annisquam; John Price, Manchester; Mary G. Lambert, Rowley; T. J. King, W. Newbury; Charles J. Peabody, Topsfield; Albert Titcomb, Rowley; H. Alley, Wenham; J. L. Stanwood, Gloucester; T. R. Lee, Essex.

All of which is respectfully submitted.

*Committee*—John W. Marshall, M. S. Jenkins, William Chickering.

## PEACHES, GRAPES AND ASSORTED FRUIT.

### PEACHES.

Thomas Capers of Newburport, best white flesh peach, first premium, - - - - - - - - - $1 00
A. S. Perkins of Salem, best yellow flesh peach, first premium, - - - - - - - - - 1 00
H. G. Sandford, gratuity on peaches, - - - - - 50
Warren Currier, Newburyport, gratuity on peaches, 50

### GRAPES.

Geo. W. Gage of Methuen, best Concord and Massasoit, 2 each, - - - - - - - - - - 4 00
Best collection, - - - - - - - - - 5 00
Luther K. Pemberton of Groveland, best Hartford Prolific, - - - - - - - - - - 2 00
A. Sargent, Riverdale, best Isabella, - - - 2 00
Geo. Todd of Gloucester, best Delaware, - - - 2 00
D. H. Stickney of Groveland, best Wilder, - - 2 00
W. H. Haskell, best Salem, - - - - - - 2 00
John Perkins of Ipswich, best collection of Cold House grapes, - - - - - - - - - 5 00
Also, best Black Hamburg, - - - - - 1 00
Warren Currier, Newburyport, best Muscat - - 1 00
S. A. Cole of Gloucester, Hamburg grapes, - - 1 00

### GRATUITIES.

J. Bartlett of Rockport, - - - - - - 1 00
T. E. Oakes, Gloucester, - - - - - - 50
Timothy Dennis of Annisquam, - - - - - 50
Mrs. Linden Mallard of Lawrence, - - - - 1 00
Sylvester Moore of Bradford, - - - - - 50
E. Dale of Gloucester, - - - - - - 1 00
Mrs. E. D. Campbell, - - - - - - - 50

### CRANBERRIES.

Thomas Haskell of Gloucester, best pk. of cranberries, 3 00
J. J. Bray of Gloucester, pk. of cranberries, 2d premium, - - - - - - - - . - 2 00

Elias Andrews of Essex, pk. of cranberries, 3d premium, - - - - - - - - - - $1 00
H. A. Stiles of Middleton, gratuity, - - - 1 00
John Hildreth of Manchester, gratuity, - - - 1 00
Peter Wait of Danvers, best basket of assorted fruit, premium, - - - - - - - - 3 00
Mrs. D. W. Low, Gloucester, for basket of wild fruit, gratuity, - - - - - - - - - 1 00

*Committee*—D. H. Stickney, Sam. W. Hopkinson, Robert Rich, Elias Andrews.

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## FLOWERS.

Your Committee tender the following report of their awards:

Best pair of parlor bouquets, T. Capers, Newburyport, $3 00
Best pair hand bouquets, E. Dale, Gloucester, - - 2 00
Best floral design, E. Dale, Gloucester, - - - 1 00
2d best floral design, Mrs. Denmark Procter, Gloucester, 1 00
Best dish cut flowers, first premium, T. Capers, Newburyport, - - - - - - - - - 1 00
Best dish cut flowers, second premium, Seth L. Cole, Gloucester, - - - - - - - - - 1 00
Best twelve dahlias, George H. Pulcifer, - - - 1 00
" " petunias, Mrs. C. W. Cochrane, - - 1 00
" " pansies, Miss Bessie Pulcifer, - - 1 00
" " phlox, Mrs. John Norwood, - - - 1 00
" " verbenas, Mrs. Martha Gale, - - - 1 00
Best collection native flowers, Mrs. Wm. Horner, Georgetown, - - - - - - - - 1 00
Largest and best display from one individual, Mrs. Daniel Low, Rockport, diploma and - - - 3 00
Dianthus pinks, Mrs. C. W. Cochrane, gratuity, - - 50
Vase flowers, Miss M. Friend, gratuity, - - - 50
Basket of flowers, Miss Blanche Sanford, gratuity, - 50
One vase flowers, Miss Marietta Wonson, gratuity, - 50
Wardian case of ferns, Annie H. Dolliver, Gloucester, do. 50

One pair hand bouquets, S. L. Cole, Gloucester, gratuity, 50
One parlor bouquet, Mrs. Sydney Oakes, " " 50
Geraniums, " " " " 50
Fern pyramid, Clara P. Anderson, " " 50
Hand bouquet, Louise Lufkin, " " 50
Parlor bouquet, Miss Ella Wonson, " " 50
Stocks, Mrs. J. H. Headly, " " 50
Vase of gladioli, John S. Rogers, " " 50
Dish of ambronia umbellata, Miss C. B. Stanwood, " 50
Vase of cut flowers, Miss Ada C. Davis, " 50
Vase Sweet Sultan, John S. Rogers, " 50
Parlor bouquet, Mrs. Lemuel Shepard, " 50
Native flowers, Sarah E. Dennen, W. Gloucester, " 50
Autumn leaves, Mrs. D. Plummer, Gloucester, " 50
One vase flowers, Mrs. C. S. Merchant, " " 50
Rustic stand, Mrs. Seth L. Cole, " " 50
Golden banded lily, B. D. Hill, Peabody, " 50
Verbenas, J. S. Rogers, Gloucester, " 50
Vase flowers, Master D. W. Rogers, Gloucester, " 50
Fuschias, Mrs. Denmark Proctor, " " 50
Moss monument, Mrs. Geo. Nickerson, " " 50
Basket ferns and autumn leaves, Miss Eliza Stacey, Gloucester, gratuity, - - - - - - 50
Japan lilies, T. C. Thurlow, W. Newbury, gratuity, - 50

With so small a sum of money at their disposal the Committee feel wholly incapacitated to do justice to the brilliant array of flowers presented for their inspection, and in justice to the ladies of Gloucester we would say that it is the finest exhibition we have had for several years.

Owing to the kind liberality of your President, we were allowed ten dollars extra to award in gratuities.

We would suggest that the phrase in the text book, "For best pair of Floral Designs," be made to read "For the best Floral Design," for the trouble of arranging and carrying to the hall a floral design is so great, we never yet have seen on exhibition more than one design from one contributor.

*For the Committee*—Mrs. N. E. Ladd.

## VEGETABLES.

The Committee on Vegetables have made the following awards:

For twelve best specimens Early Turnip Blood Beet, $2, to Albert Titcomb, of Rowley.

For twelve best specimens Long Orange Carrot, $2, to Albert Titcomb, of Rowley.

For twelve best specimens late Sweet Corn, $2, to Joseph Sayward, of Gloucester.

For three best Savoy Cabbages, $2, to Joseph Fellows, of Ipswich.

For three best Drumhead Cabbages, $2, to Albert Titcomb, of Rowley.

For three best large Drumhead Cabbages, $2, to Gardner W. Herrick, West Gloucester.

For twelve best large Dutch Parsnips, $2, to D. G. Todd, of Rowley.

For twelve best specimens of Round Flat Tomato, $2, to E. K. Lee, of Essex.

For best dish of Tomatoes, $2, to Aaron Low, of Essex.

For greatest and best variety of Tomatoes, $2, Aaron Low, of Essex.

For six best Mangold Wurtzels, $2, to Gardner W. Herrick, West Gloucester.

For twelve best Purple Top Turnip, $2, to Allen Smith, Jr., Rockport.

For twelve best Yellow Rutabagas, $2, to Gardner W. Herrick, West Gloucester.

For twelve best White Rutabagas, $2, to C. R. Anderson, North Andover.

For three best Marrow Squashes, $2, Gardner W. Herrick, West Gloucester.

For three best Turban Squashes, $2, to Benjamin P. Ware, Marblehead.

For three best Hubbard Squashes, $2, to Franklin Alley, Marblehead.

For best peck Danvers Onions, $2, to Franklin Alley, Marblehead.

For best peck Yellow Flat Onions, $2, to R. T. Jaques, Newbury.

For best peck Red Onions, $2, to F. Alley, Marblehead.

For best peck Early Rose Potatoes, $2, to John H. Cheever, Manchester.

For best display of vegetables, diploma of the Society, to Aaron Low, of Essex.

For best collection of garden seed, $8, to Aaron Low, of Essex. For next best, $5, to Clarence E. Brown, Ipswich.

GRATUITIES.

H. A. Stiles, Middleton, cranberries, - - - $1 00
W. B. Parsons, Rockport, melons, - - - - 1 00
A. O. Estes, Rockport, collection, - - - - 1 00
B. Stanwood, Gloucester, collection, - - - - 1 00
Daniel G. Todd, Rowley, Field corn, - - - 1 00
Samuel Ingersoll, Gloucester, cabbages and melons, - 1 00
G. H. Shepherd, cabbages, - - - - - - 1 00
W. W. Perkins, Newbury, Long Smooth Beets, - - 1 00
Bennett Griffin, Gloucester, collection, - - - 1 00
C. R. Anderson, N. Andover, fine cauliflower, - - 1 00
" " " onions, - - - 1 00
E. Dale, N. Andover, collection, - - - - - 1 00
Aaron Low, Essex, Marblehead squashes, - - 1 00
" " " for collection, diploma.
George Ross, collection, - - - - - - 1 00
G. W. Herrick, W. Gloucester, Early Vermont potatoes, 1 00
David Pulsifer, Peerless potatoes, - - - - 1 00
D. W. Low, Canada Victor tomato, - - - - 1 00
John S. Rogers, fine melons, - - - - - 1 00
" " celery, - - - - - - - 1 00
W. H. Haskell, Gloucester, collection, - - - 1 00
Alden Harris, Beverly, mammoth sunflower, - - 1 00

*Committee*—I. A. Rogers, Daniel Buxton, Jr., James J. H. Gregory.

## COUNTERPANES AND RUGS.

Committee on Counterpanes, Carpetings and Rugs report:—

For best wrought counterpane, first premium, Miss Nellie M. Wonson, $4. Second premium, Mrs. Meribah Clark, $2.

Gratuities were awarded for Counterpanes as follows:

| | |
|---|---|
| Miss Mary Bennett, | $1 00 |
| Sabra Easkeat, | 50 |
| Mrs. David Aiken, | 50 |
| Mrs. John Norwood, | 50 |
| Estelle Forbes, | 75 |
| M. E Proctor, | 75 |
| Mrs. S. B. Chamberlain, | 50 |
| Mrs. Simeon Bickford, | 1 00 |
| Lydia Tucker, | 1 00 |
| Mrs. Barnard Stanwood, | 50 |
| Mrs. C. H. Peirce, | 50 |
| Mrs. Benjamin Hodgkins, | 50 |
| Mrs. L. P. Winter, piece of stair carpeting, | 75 |

Best wrought hearth rug, first premium, Miss Lizzie Baxter, $3. Second premium, Mrs. B. F. Stanley, $2.

Gratuities were awarded for Rugs as follows:

| | |
|---|---|
| Mrs. Nancy Parsons, | $1 00 |
| Mrs. E. Maguire, | 50 |
| Mrs. Anna Harraden, | 50 |
| Mrs. Charles Wilmington, | 75 |
| Mrs. Warren Burnham, | 1 00 |
| Mrs. David Low, | 75 |
| Mrs. Thomas Proctor, | 1 00 |
| Mrs. Benjamin Bowden, | 75 |
| Mrs. D. R. Parker, | 1 00 |
| Mrs. Mary Swift, | 50 |
| Mrs. John Wilkins, | 1 00 |

*Committee*—H. G. Herrick, Mrs. H. G. Sanford, Mrs. Bennett Griffin, Mrs. Barnard Stanwood, Wm. D. Lamb.

## ARTICLES MANUFACTURED FROM LEATHER.

We award for articles manufactured from leather as below:

H. S. McCullock, Gloucester, two sets Harness, gratuity, $5 00
John F. Todd, two pairs Boots, gratuity, - - - 2 00
Wm. L. Crockett, one pair Boots, gratuity, - - 2 00
James S. Jewett, one pair Boots, gratuity, - - - 1 00

*Committee*—Edward N. Jacobs, H. E. Ladd, Geo. W. Keene.

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## MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on "Manufactures and General Merchandise" have attended to their duty and award the following premiums and gratuities.

For the best display of Bonnets, 1st premium to W. O. Ward, Gloucester, $4 00; 2d best, 2d premium to S. H. Emanuel & Co., Gloucester, $2 00.

For best specimen Horn Comb to Thos. Hale, Rowley, $3.

GRATUITIES.

Manning & Co., Rockport, 4 Sheets Fish Glue, - - $2 00
" " 3 Bunches Isinglass, - 1 00
H. E. Whales, Haverhill, 1 case Dental Work, - - 1 00
F. W. Evans, Newburyport, Patent Clothes Dryer, - 1 00
Manning Organ Co., Rockport, 2 Organs, - - - 3 00
R. G. W. Foster, Amesbury, Frame, - - - 1 00
Newell Giles, 2 Packs Isinglass, - - - - 2 00
W. R. Porter, 3 Sad Irons, - - - - - 1 00
Gloucester Copper Paint Co., Copper Paint, - - 2 00

*Committee*—George W. Keene, J. B. Sweet, H. G. Herrick.

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## FANCY WORK.

REPORT OF THE COMMITTEE ON FANCY ARTICLES.

We would award for work done by children under 12 years:

To Lulu Hunt, of Gloucester, aged 7 years, for tidy mat, second premium, $2.

To Henry W. Tarr, of Gloucester, aged 7 years, for cherry stone watch chain, second premium, $2.

To Ida McDonald, of Gloucester, aged 11 years, for crayon picture, $1.

To Helen M. Dennis, of Gloucester, aged 10 years, for lamp mat, $1.

To Alice A. Morgan, of Wenham, aged 11 years, for tidy, $1.

To Fannie L. Story, of Gloucester, aged 12 years, for tidy, 50 cents.

To Charles P. Ross, of Gloucester, for wooden chain, 50 cents.

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To Mrs. Sarah Riggs, of Gloucester, aged 92 years, silk patch work, $1.

To Mrs. R. D. Wait, of Ipswich, aged 89 years, one pair hose, $1.

To Mrs. Mary H. Gilbert, of Gloucester, aged 87 years, knit blanket, $1.

To. Mrs. J. P. Trask, of Gloucester, aged 70 years, tapestry 50 cents.

To Miss E. A. Blood, of Gloucester, two portraits of great merit, $2.

To Miss J. W. Knowlton, of Rockport, a fine collection of Cape Ann minerals, $1.

To Horace Bass, of Gloucester, a fine collection of Cape Ann birds, $1.

To Edward A. Johnson, of Manchester, a fine collection o articles turned from wood, $1.

To Edward Flint, of Manchester, cut vase of wood, $1.

To Mrs. Mary E. Goodnow, of Gloucester, 3 cushions, &c., $1.

To Miss Edith Kendall, of Gloucester, box of tatting work, $1.

To Mrs. J. N. Millard, of Gloucester, a tastily arranged bouquet of Bermuda sea-weed, $1.

To Mrs. Frank Dunn, of Gloucester, a fine display of Chinese and Japanese work, $1.

To Mrs. Wm. N. Perkins, Jr., of Gloucester, afghan, $1.

To Miss H. M. Burnham, of Gloucester, table cover, 50 cents.

To M. E. Sawyer, of Gloucester, toilet set, 50 cents.

To M. E. Bray, of Gloucester, tidy and watch case, 50 cents.

To Etta Lufkin, of Gloucester, watch case, 50 cents.

To Mrs. E. N. Knowlton, of Beverly, embroidery, 50 cents.

To Mrs. Addison Merchant, of Gloucester, afghan, 50 cents.

To Mrs. S. E. Chamberlain, of Gloucester, tidy and skirt, 50 cents.

To John Stimpson, of Gloucester, cocoanut baskets, 50 cents.

To A. M. Richardson, of Rockport, scrap bag, &c., 50 cents.

To L. A. Bigelow, of Gloucester, lamp mat, 50 cents.

To Emma H. Gage, of Methuen, tatted skirt, 50 cents.

To Mrs. P. Haskell, of Gloucester, 6 pairs nippers, 50 cents.

To Mrs. Frank Dunn, of Gloucester, marble painting, 50 cents.

To Mrs. S. M. Wheeler, of Gloucester, 2 lamp mats, 50 cents.

To Mrs. M. R. Scripture, of Rockport, ottoman cover, 50 cents.

To Mrs. C. Smith, of Gloucester, frame of wood, 50 cents.

To Mrs. Cyrus Story, of Gloucester, sofa pillow, 50 cents.

To Mrs. Charles E. Grover, of Gloucester, picture, 50 cents.

To Mrs. Geo. S. Tomlinson, of Manchester, crayon picture, 50 cents.

To Frank K. Rogers, of Gloucester, two pictures, 50 cents.

To Mrs. N. E. Ladd, of Groveland, spatterwork, 50 cents.

To Mrs. Joshua Ingersoll, of Gloucester, shell monument, 50 cents.

To S. C. Parsons, of Gloucester, sea mosses, 50 cents.

To Nellie M. Wonson, of Gloucester, wax leaves, 50 cents.

To James Parker, of Gloucester, three pictures, 50 cents.

To Mrs. T. K. Leach, of Topsfield, sea mosses, 50 cents.

To G. A. Williams, of Salem, knit shawls, 50 cents.

To M. J. Bingham, of Manchester, knit jackets, 50 cents.

To Amelia Martin, of Manchester, pillow cases, 50 cents.

To Sophia Gangloff, of Gloucester, box fancy work, 50 cents.

To Aaron F. Clark, of Gloucester, picture and table, 50 cents.

To Ida Mayo, of Gloucester, hair pin cushion, 50 cents.

To Abbie Mayo, of Gloucester, towel rack, 50 cents.

To Mrs. John Parker, of Gloucester, pin cushion, 50 cents.

To Miss Mary Low, of Gloucester, embroidered skirt, 50 cents.

To Estelle Deering, of Gloucester, two pictures, 50 cents.

To James H. Laver, of Gloucester, crayon, 50 cents.

To Mrs. Sarah B. Saville, of Gloucester, painting, wild flowers, 50 cents.

To Clara F. Brackett, of Gloucester, tidy, 50 cents.

To Mrs. S. F. Small, of Gloucester, fancy sewing, 50 cents.

To Mrs. Ellen Lufkin, of Gloucester, laundry work, 50 cents.

To Mrs. Laura E. Elwell, of Gloucester, embroidered skirt, 50 cents.

To George Douglass, of Gloucester, pen work, 50 cents.

To. Mrs. John F. Wonson, of Gloucester, 2 pictures, 50 cents.

Whole number of contributors, 156.

Number awarded gratuities, 65.

Amount at disposal of Committee, $55.

Amount awarded by Committee, $44.50.

*For the Committee*—Andrew Nichols.

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## POULTRY.

A few, still remain in our county ,who either from prejudice against all improvements, or some other cause are still satisfied with the barn-yard fowl, so called, a fowl bred hap hazard since the settlement of our country ; but the number is small, and growing beautifully less compared with the rapidly increasing number of those who are not at all satisfied with the above, but want a more showy and profitable bird. This, some find in the Light Brahma, with its snow white feathers, in beautiful contrast to the black tail and penciled neck, which with its lofty carriage and contented appearance, admits it to the class of the most attractive ; while its hardiness and disposition to make returns for all expense and trouble bestowed upon it make it the best of the winter layers. About the same may be said of the Dark Brahma as it differs but little from the Light except in plumage. Others find their beauties and great egg producers among the different varieties of Cochins all of which are beautiful when purely bred. A rapidly in-

creasing number find in the Plymouth Rock, a new variety, all they desire in poultry ; beauty, and utility. Again, some favor the French varieties, while a large number, which is fast approaching a majority of all poultry admirers give precedence to the Leghorn, a breed of which there are three varieties, viz. : Brown, Dominique and white—the Brown at the present time, standing on the top-most round. Thus we see that each variety of each breed has its admirers, and therefore, to interest and reach the pockets of all, no variety can be discarded.

It is the aim and object of the Essex Agricultural Society to promote the interests, not only of agriculturists, but of all producers, and the poultry breeder can only be benefited by creating more interest and enthusiasm in poultry raising ; but, say many, the hen fever is high now,—admitted, but it is not high enough, or ever will be, until perfect birds of each variety become the rule instead of the exception.

The merchant, tailor, grocer, &c., &c., each and all put their hands in the producer's pocket, and so must he put his hand in their pockets, and how can he better do it than by producing perfect birds to sell, for many do keep, who cannot breed fowls.

Then, the poultry interest is one which the Society should foster and increase to the utmost. How shall it be done? As a starting point we respectfully offer the following suggestions.

Provide a tent or *some* shelter for the poultry when on exhibition, and again bring into the arena Essex Co's most experienced and, therefore, best breeders, who retired from the contest because they found neither profit or pleasure in exposing their birds which had been carefully housed at home, to the inclemency of the weather, unless it was in the colds and subsequent roup caused by such exposure.

Offer more premiums. A first and second for fowls and chickens of each variety of each breed recognized by the Society, whether it be one, as the Plymouth Rock, or three, as the Leghorn, and thereby, increase the interest and number of exhibitors. Increase the interest and pleasure of visitors by proper arrangement ; that is require each class, each breed, and each variety of each breed, to be placed contiguously, so

that the lover of any particular variety can examine those of his choice without going the entire length of the line of coops, and so that your committee can do its duty better and easier. Give no premiums when birds are not properly mated in the coops, or when they do not figure a certain number of points, the number to be fixed by the society.

The above suggestions are derived from the Massachusetts Poultry Association's rules at its exhibitions, and may be worthy of your consideration.

By adopting the foregoing rules, or better ones, as from time to time they suggest themselves to the society, we see no reason why the poultry exhibition, at the Essex Agricultural Society's annual fairs may not become equal to any in the state or nation.

*Chairman*—J. C. Underhill.

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## GRAIN CROPS.

A. P. Noyes, of Middleton, entered a crop of rye.

Two of the Committee viewed it on the second of July. It was nearly five feet high, remarkably even, free from rust, but apparently suffering from the unusually early drought. They would recommend awarding to him the diploma and premium of ten dollars.

It will be seen by the accompanying statement that the yield was thirty-three bushels per acre. The crop last year was corn. He makes no mention of the straw, which has been nearly as high in Boston market the past year as the best of English hay. The raising of grain in this county at the present time is up-hill work, and few, if any, would grow it, if they could get their land into grass without it. To some extent this can be done. The Early Rose potatoes ripen early enough so that they can be harvested and the land sown with grass seed soon enough for it to get well rooted before winter.

We get but little information from Mr. Noyes's statement in regard to the cost of growing a crop of rye. When rye is

worth one dollar per bushel, and labor costs twenty-five cents per hour, to cut with the cradle and bind and thresh with the flail, as we must do to save the straw, it will take a large part of the grain to pay for harvesting and threshing; if there is any margin above the cost, it must be upon the straw. Although rye may be grown upon comparatively poor soil, yet when the grain and straw are both sold from the farm it must be an exhausting crop.

We had no entry for wheat, oats or barley, and but one for Indian corn.

Lafayette Day, of Bradford, entered a crop of corn. The chairman was alone in his examination of this crop, but will take the responsibility of recommending the award of the premium of $10 and diploma to Mr. Day.

This field is near the Merrimac River; the soil appeared to be a sort of alluvial deposit, where corn can be grown as cheaply as in any part of the county.

From his statement we find the cost of growing the corn per

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|---|---|---|
| acre, for manure, thirty-two dollars, - - - | | $32 00 |
| Ploughing, $6, harrowing, $3, seed, .70, planting, $6, | | 15 70 |
| Cultivating, $15, cutting stalks, 7, harvesting, 26, - | | 48 00 |
| Cost, - - - - - - - - - | | $63 70 |
| 83 bushels of corn, entire stock, - - | 68 40 | |
| Value of fodder, thirty dollars, - - | 30 00 | 98 40 |
| Total profit, - - - - - - - | | $34 70 |

*For the Committee*—Wm. R. Putnam.

STATEMENT OF LAFAYETTE DAY.

BRADFORD, MASS., Nov. 7th, 1873.

MR. PRESTON:

DEAR SIR.—The Committee on grain crops have visited my premises and requested me to hand the report to you. I will now make a statement concerning the land. It is one acre and a half in size, the soil is loamy. In 1871, it produced a grass crop, in 1872 a corn crop. The dressing I used was twenty oxcart loads of barn-cellar manure per acre.

Treatment of 1873—This year I put on the same amount of manure, of which, four-fifths I ploughed in and the rest put in the hill. The cost of the manure was forty-five dollars. In addition to this I put on twenty bushels of ashes after the corn was up. Their value was three dollars and a half.

I ploughed it May 1st, eight to nine inches deep, at a cost of six dollars. It was harrowed twice, at a cost of three dollars. It was planted May 20th, three feet and nine inches apart each way, and from five to six kernels in a hill, which was about ten quarts per acre. The seed was that which was formerly known as the Mitchell corn, eight rowed yellow corn with a red cob. The cost of the seed was seventy cents; planting, six dollars.

It was cultivated three times, weeded once, and cultivated twice. The cost of cultivating, including weeding, was fifteen dollars. I cut and tied the stalks Sept. 1. The cost of cutting was seven dollars. The bulk was equal to three tons of English hay. It was harvested October 25th; cost of harvesting, including husking, was twenty-six dollars. The corn when shelled and weighed amounted to eighty-three bushels per acre. The bulk of the butt-stalks was about two tons.

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## ROOT CROPS.

The Committee on Root Crops respectfully report the following:—

The number of entries are few, and indicate a decreasing interest in the cultivation of many varieties of roots.

There were but three entries made this season. Two of onions; one by Mr. Albert Titcomb of Rowley, and one by Mr. George N. Ordway of West Newbury; and a crop of Cabbages by Mr. Albert E. Lufkin of Essex.

One statement came to the Committee in a very imperfect manner. The papers which have been laid before them are herewith submitted, and premiums awarded to those who have complied strictly with the rules of the society.

We award to Albert Titcomb of Rowley, for best crop of Danvers Onions, the 1st premium of Diploma and $10.

To Albert E. Lufkin of Essex, Diploma and $10, for his crop of Stone Mason Cabbages.

*Committee*—A. B. Fellows, James P. King, Joseph S. Howe, Aaron Low.

STATEMENT OF ALBERT TITCOMB.

Statement concerning a crop of onions, raised by Albert Titcomb in the town of Rowley, 1873.

In 1871 the crop was onions. Cattle manure from barn cellar, about thirty loads to acre was used.

The crop of 1872 was onions, and about the same kind and quantity of manure was used as in '71. A strong, floury soil with clay bottom.

For the crop of 1873, ploughed once the previous autumn, about five inches deep; after ploughing we applied thirty loads of thirty bushels each, barn cellar manure on the top. In the spring the land was thoroughly pulverized with wheel, tooth and brush harrows. The manure was applied in a green state, and became hard and crusty; fearing that it was not fertile enough for plant food in the early season, I spread on the top and harrowed in six hundred pounds of Cumberland Superphosphate to three fourths of an acre. We then raked the land smooth, and on the 13th of May sowed, with seed sower, Yellow Danvers Onion seed, at the rate of five pounds to the acre. Half the seed was new and half one year old. I think the new seed did the best. We hoed and weeded the bed four times, and weeded once when the onions were large. The crop was harvested in this manner:—We pulled four rows, threw them on the bed, then hoed the space and raked the weeds clean; we pulled four rows more and threw them on the clean space; hoed and raked as before, and so on through the whole bed.

Part of the onions were topped on the bed, the remainder carted to barn to be topped in unfavorable weather. The topping can be done much quicker on the bed if the weather is favorable.

*Cost of raising crop on half an acre.*

| | |
|---|---|
| 15 loads manure at $2 50, | $37 50 |
| 300 lbs. Cumberland Superphosphate at 3 cents, | 9 00 |
| Ploughing, | 2 50 |
| Harrowing, | 2 50 |
| Raking, | 2 00 |
| Sowing seed, | 1 50 |
| Hoeing and weeding, | 25 00 |
| Pulling and topping, | 18 00 |
| Carting to barn, | 8 00 |
| Barrels, | 35 00 |
| Barrelling, | 6 00 |
| Carting to station, | 6 00 |
| Use of land, | 10 00 |
| Storing, | 5 00 |
| | $168 00 |
| Amount of crop 423 bushels to half acre or 147 bbls. at $3 50, | 514 50 |
| Net profit, | $346 50 |

The above statement is made by estimation, except the amount of crop which was measured by David J. Woodman.

STATEMENT OF ALBERT E. LUFKIN.

The land, on which the cabbages I enter for premium were raised is a hard clay soil; it had been in grass for fifteen years (or more) with very little manure during the time; and the crop for two or three years was very light.

Plowed in spring of '72; applied about three cords manure, mostly spread on; and planted with corn and potatoes; and had a very good crop.

Plowed this year May 19th. Spread on two cords manure and one cord rock-weed. Manured in the hill with one cord composted fish manure, and planted May 28th with Stone Mason cabbage; re-set about one-half the plants from the 18th to 20th of July.

The lot, as measured by the committee, contains 85 rods; and I have harvested from it 2,020 marketable cabbages, estimated to weigh 10 pounds each.

*Dr.*

| | |
|---|---|
| To 3 cords manure, | $24 00 |
| " Rockweed, | 3 00 |
| " 3 days labor, | 5 25 |
| " seed, | 2 00 |
| " cultivating, | 2 50 |
| " 7 days hoeing, | 14 00 |
| " 2 days setting plants, | 4 00 |
| " harvesting and marketing, | 25 00 |
| | $79 75 |

*Cr.*

| | |
|---|---|
| By 168 dozen cabbages at 75 cents, | $126 00 |
| Net profit, | 46 25 |

This is to certify that I have helped harvest the above crop and consider this a correct statement.

SAMUEL LUFKIN.

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## CRANBERRIES.

The Committee on the cultivation of the cranberry have attended to their duty and respectfully submit the following report:

Mr. Hiram A. Stiles, of Middleton, is the only person who claims a premium, under the rules of the Society, for his experiment in the cultivation of the cranberry. With this report will be found his statement of his method of cultivating that luxurious and healthful fruit. On the 12th of September, 1873, the Committee visited Mr. Stiles and viewed the grounds on which his experiments have been made. There we found a

fine crop of berries, ripe and fit to be gathered. This was a very favorable time to view his crop and to learn the result of his experiments. His method of preparing the ground for the planting of vines has been varied on different parts of his meadow, and the results have been different. Upon that part to which we were first introduced he had spread a thick coat of gravel or coarse sand, after having ploughed the ground. On those parts of his meadow treated in this manner we found the berries much smaller in size and the vines far less productive than when the ground had only been ploughed and smoothed, without any top dressing having been put upon it. From Mr. Stiles's experiments, as well as from our own experience in this business, we think that we may infer that the natural soil of our meadows is best adapted to the growth of the cranberry. No top dressing has ever been put upon that particular spot of meadow on which Mr. Stiles claims a premium. The ground was only ploughed and smoothed, and the vines were set in the natural soil. No expense has since been incurred upon it.

On viewing this spot we found the vines grown so rank as almost to prevent the grass from springing up among them. The crop upon these vines was abundant, the berries were of an extraordinary size, ripe and beautiful and of an excellent quality. It was truly a fine sight to look upon. This was perhaps the largest crop that has ever grown upon these twenty square rods of ground, measuring twenty-three bushels, equal to one hundred and eighty-four bushels to the square acre.

Mr. Stiles has not always been able to keep his meadow flowed in the winter season, and no doubt his crop may sometimes have failed on this account. Unless our meadows be kept flowed during the freezing months and drained during the summer, we can have no certainty of a crop of cranberries; but if this be done, perhaps no crop of fruit is so sure as that of the cranberry, unless some casualty happen to it, such as early frosts or the ravages of the cranberry worm, that sometimes destroy almost a whole crop. Any bog meadow that can be drained and flowed can be turned into a rich cranberry field, and there is much of this kind of land that can be made

to yield a large income with but a trifling expense. We think well of Mr. Stiles's method of ploughing his meadow in preparing it for the planting of the vines; there are many advantages resulting from it. But there are meadows that cannot be ploughed; on such cranberries can be grown with much profit without ploughing. We know of several such meadows, one in particular, on which so much as a peck of cranberries had never grown since the recollection of the oldest man living. Some ten or twelve years ago this was drained by ditching; the peat taken from the ditches paid the expense of it. A small flume was built so as to flow the meadow in the winter to the depth of about four feet; this cost but about five dollars. The third year after this work was done, the vines without planting had grown so as to bear twenty bushels of cranberries. This is but a small piece of meadow, and from that time to the present the average yield has been from twenty to forty bushels per year. We could name other meadows that have yielded a large income without any planting of vines. But perhaps we have already gone beyond our proper bounds, and we will close our remarks by saying that, as we understand it, the question of premium in this case belongs to the trustees to decide at their meeting in November, and we can therefore only give our opinion regarding Mr. Stiles's merits in the case. We consider him worthy of much praise for the pains he has taken in his experiments, and we think he is entitled to a premium for his successful cultivation of the cranberry on the twenty square rods which he has entered for premium.

*Chairman*—Gilbert Conant.

### STATEMENT OF HIRAM A. STILES.

MIDDLETON, November, 1873.

STATEMENT CONCERNING A CROP OF CRANBERRIES.

The portion of land upon which the cranberries grew which I offer for premium, contains twenty rods. It was ploughed to the depth of ten inches in September, 1866, using the Michigan sod plough. The land previous to ploughing produced from

1200 to 1500 pounds of hay to the acre, of good quality for meadow. The nature of the soil is sandy, and to the depth of twelve to eighteen inches is more abundant than nearer the surface.

The land was harrowed with the Iron Tooth Harrow and *rolled*, for the purpose of leveling the surface and preventing grass from springing up between the furrows. About the 20th of May the following year, the vines were taken from a bog meadow by hand and set in holes, made ten inches apart. The roots were generally placed downwards, using from five to ten vines to a bunch, covering the same to the depth of two inches. Since that time no labor has been expended.

The average annual yield of berries up to the present year has been about two bushels. The berries the present year are uniformly large in size and of excellent quality; quantity of berries the present year, twenty-three bushels.

| | |
|---|---|
| Cost of ploughing, harrowing, &c.. - - - | $4 00 |
| Cost of procuring and setting vines, - - - - | 11 00 |
| Cost of gathering and marketing, - - - - | 20 00 |
| | $35 00 |
| Market value of berries, - - - - - - | 88 00 |
| Balance, - - - - - - - | $53 00 |

This may certify that having witnessed the measurement of the land upon which the cranberries grew, I regard it as correct.

JOHN W. L. MOULTON.

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## DESTRUCTION OF CANKER WORMS.

The Committee on Destruction of Canker Worms respectfully submit the following report:—

The Committee were invited to visit but one orchard,—that of Daniel Foster, 2d, of N. Beverly—whose statement is hereto annexed. They recommend the award to him of the first premium of $25. Mr. Foster's orchard was visited in the latter

part of August. The trees were well loaded with fruit, and no traces of canker worms could be seen upon the foliage. Mr. Foster stated that until within two years the trees have been completely stripped of their leaves. He then had "Matthews' Protector" placed upon the trees, since which time they have been entirely free from worms.

The "Protector" is simply a covered metal trough encircling the tree, and filled with crude petroleum. To prevent the grubs crawling up under the "Protector," the space between the trough and tree is carefully packed with dry oakum. The protectors have never been removed from the trees since placed upon them two years since. Mr. Foster stated that the total expense of protecting two hundred and fifty trees was $268—a little more than a dollar per tree. His orchard is comparatively young, and the trees of medium size. Your committee are well aware that a premium given under these circumstances implies an endorsement of the preventive used and hence have endeavored to ascertain whether "Matthews' Protector" has proved successful in other instances.

From the best evidence that could be obtained, the Committee were satisfied that Matthews' Protector properly applied and used, entirely prevents the passage of the grub. The chief objection to its use is the expense—as its cost is ten cents per inch in diameter, applied to the trees and ready for use. Probably orchardists having a small number of trees may find it for their advantage to use such a protector even if somewhat expensive.

But farmers having extensive orchards, will be likely to hesitate before incurring such an expense, and inquire if some other, cheaper methods cannot be found. We do not now propose to discuss this point, or the expediency of making such an outlay on a large orchard.

We will only add that in the judgment of the Committee, "Matthews' Protector" is not a swindle, and that if farmers are willing to expend the amount necessary to apply it, they can in that way fully protect their trees from the ravages of the canker worm.

*For the Committee*—Joseph S. Howe.

STATEMENT OF DANIEL FOSTER, 2D.

To the Committee on Destruction of Canker Worms :— I enter for premium my orchard of two hundred and fifty trees which I have protected for the past two years by the use of "Matthews' Tree Protector."

The trees had been badly eaten for several years previous, but they have now fully recovered from the ravages of the worms, and this year have a good quantity of fruit.

I consider the Protector a sure preventive.

North Beverly, Sept. 23, 1873.

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## TREADWELL FARM.

REPORT OF THE COMMITTEE ON THE TREADWELL FARM.

The seven years' lease of the farm to Mr. A. H. Gould expired last April. The Committee then let it to Mr. T. W. Pierce, for the term of one year, for five hundred dollars rent, not confining Mr. Pierce to any particular system of cultivation.

*Committee*—Benjamin P. Ware, Geo. B. Loring.

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## ESSAYS, FARM ACCOUNTS AND REPORTS OF COMMITTEES.

The Committee on Essays and Farm Accounts, after a careful examination of the several papers submitted to them, award the following premiums, to wit :—

First premium, of $15, to Francis H. Appleton, of Peabody, for essay on "Foreign Agricultural Experiences."

Second premium, of $10, to Charles J. Peabody, of Topsfield, for essay on "Hints and Suggestions on Managing the Farm."

Premium of $10, to Francis H. Appleton, of Peabody, for "Farm Accounts."

*Reports of Committees.*

First premium, of $10, to J. D. W. French, of No. Andover, for report on "Bulls."

Second premium, of $8, to Gilbert Conant, of Ipswich, for report on "Cranberries."

Third premium, of $6, to T. C. Thurlow, of West Newbury, for report on "Best Collection of Fruit."

*For the Committee*—Charles A. Sayward.

Ipswich, Dec. 9, 1873.

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## ESSAYS.

### FOREIGN AGRICULTURAL EXPERIENCES.

BY FRANCIS H. APPLETON.

It is now a rather late date to attempt to write an essay for presentation to the Society's Committee, to be completed before the required time, especially as my six months' absence from home has made much business for me that calls for immediate attention. Having, however, attended the Show of the Yorkshire Agricultural Society of England, and the Show of the Highland and Agricultural Society of Scotland, I want to give some information about what I saw at them. I was only a part of a day at the former, but was three days at the latter. The former is the Society's Show of the largest county in England, and the latter, while it is the leading Agricultural Society of Scotland, is also a worthy rival of the Royal Agricultural Society of England.

I left London one morning and reached Harrowgate, in Yorkshire, the same afternoon, it being the 4th of August. The following morning the Show opened at 9 o'clock, and I was at the entrance early, where I found the fee equal to about seventy cents. The following day the fee was about twenty-eight cents. The first day at English shows is generally the time that the judging takes place, so that, in order to avoid a large crowd of people which would impede the judging, the fee

is then placed at a higher figure than afterwards. It is their object, also, to have the prizes all awarded and every prize animal and article distinctly labelled as soon as possible after the entrance gates are opened to the public. At some English shows that I attended, the judging was completed before the public was admitted.

The judges are carefully selected men, and every thing that is placed on exhibition is subject to the Societies' laws and regulations, which are strictly enforced. These laws and regulations have been carefully compiled and revised, and, as they at present exist, are the result of many years of practical application and experience.

To no country can we so well turn for instruction in the management of our Agricultural Societies as to our mother country, old England. I did not meet with a case where a committee of judges was composed of more than three persons, and they often consist of only two members.

No entries can be made with the Secretary of a Society after a fixed day, at least several weeks before the Show takes place, thus allowing the necessary provision to be properly made for the exhibitors, the positions on the grounds to be definitely assigned beforehand, and a complete catalogue of every animal and article exhibited to be printed, containing a plan of the grounds, showing the exact position of the various classes. These catalogues are for sale during the Exhibitions, and as soon as all the prizes have been awarded, a list of these also is printed and sold. The former sold for about twenty-six cents, and the latter for half that amount.

By the methods adopted in England and Scotland, the prizes are so carefully awarded that inferior and unworthy animals, etc., very seldom, if ever, find their way into the prize lists.

The officers of the Societies personally superintended the carrying out of all the arrangements upon the Show ground, assisted in expediting the duties of the judges by preventing delays in bringing animals into the rings and in other ways, saw that the prize cards were properly attached to the animals, had order enforced when such was necessary, and made themselves generally useful in whatever ways were possible.

Suitable offices were provided upon the grounds for the Government of the Societies, judges and reporters. A refreshment room was also there under the patronage of the Society, but was in no way financially connected with the Society.

Yorkshire being a part of England where many hunters are bred, this class of horses formed a large part of the exhibition, and a magnificent lot of animals they were. A large ring, about 280 feet long by 130 feet wide, with rounded corners, was used for judging them, and there was also a smaller ring with a swinging hurdle in its centre for testing their leaping powers. There was also a third ring for judging cattle, about 150 feet long by 100 feet wide. Each of these rings had two swinging gates at either end, one having "Entrance" and the other "Exit" over it, in white letters on a black ground. The former was conspicuous only from outside the rings, and the latter was readily seen from the inside. All chances of confusion were thus very much lessened. In the centre of the judging rings were seats for the judges, and a signal board, upon either side of which were posted the number of the class, as shown in the catalogues, and the numbers of the animals receiving the prizes; the numbers were changed as each class left the ring.

Each animal carried a white cardboard label, bearing its catalogue number in black lettering, which was tied between the horns of cattle and on the breast of the horses, as a means of ready reference to the catalogue, where full descriptions of all entries were given. The prizes are awarded and the ribbons attached to the animals by the judges before they are sent from the rings.

On the last day of the Yorkshire Show, which lasted three days, there was a parade of the Short-Horns at 10 A. M., and at 10.30, a parade of all the horses, in the largest ring in front of the grand stand. The several rings were enclosed by a wooden fence, formed by driving three-inch by four-inch joist into the ground, about eight feet apart, leaving about four feet out of the ground, then nailing a similar piece of joist along their tops. The cattle were in open sheds, twenty feet wide

and of the required length, divided in the centre by a partition, which reached to their top and extended their whole length, and on either side of this partition stalls, ten feet square, were formed with boarded sides, about four and one-half feet high, to hold one animal. These sheds were covered with canvas, as were all the other buildings, except a few of the largest.

One cattle ring was sufficient, as it being the home-county of the Short-Horns, the other breeds were represented by a very small number of animals. In the same way among horses, the hunters so largely predominated that one ring sufficed.

At the entrance several self-registering turn-styles were placed, and each visitor was notified, by a conspicuous sign, to enter through one or the other style according to the kind of ticket that he possessed. This, besides being a precaution against dishonesty, was also the means of readily recording the number of visitors at the Show.

The agricultural implements, road-engines and other portable steam engines, were the only articles not under cover, and even some of these were provided with shelter; all live stock and other articles were in covered sheds. At the Yorkshire Show a number of closed boxes were provided for horses, and also a row of boxes with open fronts. All the horse boxes and sheds were here arranged with the fence enclosing the grounds for one side.

Let me now speak of the Highland and Agricultural Society's Show, more particularly in those respects wherein it differs from the Yorkshire. Much of what I have already said will also apply to the former.

All horses, except brood mares with foal by their side, were shown in stalls arranged with the heads towards the high fence which enclosed the Show grounds, and with a passage about eight feet wide behind the animals, under the same cover; this was a close shed, and the fact that there were two hundred and ninety-seven horses entered for exhibition will give an idea of the length of shed required. The boxes for the brood mares were arranged in the line of stalls and were about the width of two stalls and length of one, the fronts being formed

with movable wooden rails to the height of four and one-half feet. Every day, except the first, there was a parade of all the horses in the morning and also in the afternoon, commencing respectively at 12 and 2.30 o'clock ; but the cattle were never paraded. This may seem to many of my home readers a hard thing to accomplish satisfactorily, knowing the number of horses exhibited, but each class being paraded separately though in quick succession, and volunteers being ready to lead the horses when necessary, who seemed to be stimulated to do so by their interest for the success of the Show, every horse was always present in the line looking his best.

The prize winners took the lead in their proper order of merit and were distinguished by different colored ribbons, every animal having his catalogue number attached to him in a conspicuous place. This constituted the chief feature of interest to the mass of the people, and took place in the large ring in front of the grand stand, where an extra fee of about twenty-six cents was charged for entrance.

Everything was arranged on the grounds according to their classes, and every class was arranged according to the order in which the entries were made with the Secretary. Thus full justice could be done in the criticisms of visitors, and the judges, knowing this fact and feeling that their reputation was thus at stake, were necessarily most careful in making their awards of prizes.

A military band played well selected music at fixed hours during the Shows. To make an average statement, it may be said that the grounds were opened to the public at 8.30 A. M., and closed at 6 P. M.

The complete catalogue of the Yorkshire Society contained about one hundred pages, with some additional pages, the use of which was sold for advertisements. It also contained a good plan of the Show grounds and the programme for the Show. It was a pamphlet measuring five and three-eighths inches by eight and one-half inches. The Highland and Agricultural Society had one catalogue for live stock, containing one hundred and four pages, and another for other entries of

seventy-two pages, each with no advertisements. Both of these were the same size as the Yorkshire catalogue, and all had good indexes.

The total number of live stock entries in the Highland and Agricultural Society were: Cattle—Short-Horns, 83; Polled Angus and Aberdeen, 68; Galloway, 40; Ayrshire, 126; Highland, 47; Fat Stock, 38; extra cattle, 4; total, 406. Horses—for agricultural purposes, 221; hunters and roadsters, 40; ponies, 27; extra horses, 9; total, 297. Sheep—Cheviot, 67; blackfaced, 55; Border Leicester, 67; long wooled other than Leicester and Border Leicester, 35; Leicester, 15; Southdown, 9; Shropshire, 20; short wooled other than Southdown and Shropshire, 3; extra sections, 4; extra sheep, 3; total, 278. Swine, (divided into two classes only, large and small breeds,) about an equal number in each class, 61; extra swine, 1; total, 62. Poultry, 387. Summary, by heads, cattle, 406; horses, 297; sheep, 582; swine, 96; poultry, 534; total, 1915.

The total number of entries, by heads, in the Yorkshire Agricultural Society were: cattle, 106; sheep—Leicester, 78: Lincoln, 64; Shropshire, 33: total sheep, 175. Pigs, twelve months old and upwards, large breed, 7; small breed, 10; black or Berkshire breed, 7; breeds not qualified to compete in previous classes, to be judged in one class, 17; pigs, not exceeding twelve months old, large breed, 11; small breed, 19; black or Berkshire breed, 11; pen of three store pigs of any breed from four to nine months old, 15; total pigs, 97. Horses, 335. Blacksmiths, (competition for prizes), 23. Total entries of live stock, as in catalogue, 736.

I feel that we can take many a good suggestion from the facts I have given, and I hope my fellow countrymen and others will peruse them and compare them with our needs at home.

The English Societies have no located grounds, but have always found it best to move from place to place each year. Their grounds are fitted up by contract, and the boarding is sold after the close of the exhibitions. The Smithfield Club Fat Cattle Show in London is one of the very few that are

located. This, however, cannot be compared with our Agricultural Society Shows. In English Shows animals have every opportunity given by which all the useful powers of the animals exhibited for the Society's premiums can be displayed and judged.

In order to give a good idea of the encouragements offered for the breeding of both beef and milch cattle in Great Britain, I give the following summary of prizes, etc., offered by the Yorkshire Society for Short-Horns, representing beef cattle, and by the Highland and Agricultural Society for Ayrshires, representing milch cattle :—Short-Horns, class I., bulls any age above three years old, best, $140; second, $55; third, $27; 9 animals entered, but 6 exhibited. Class II., bulls above two and not exceeding three years old, best, $112; second, $55; third, $27; 5 entered, but 3 exhibited. Class III., bulls above one and not exceeding two years old, best, $112; second, $55; third, $27; 11 entered, but 9 exhibited. Class IV., bull calves above five and not exceeding twelve months old, best, $82; second, $55; third, $27; 16 entered, but 11 exhibited. Class V., cows of any age above three years old, in calf or milk, best $140; second, $55; third, $27; 8 entered, but 4 exhibited. Class VI., heifers not exceeding three years old, in calf or milk, best, $112; second, $55; third, $27; 13 entered, but 8 exhibited. Class VII., heifers not exceeding two years old, best, $112; second, $55; third, $27; 11 entered, but 6 exhibited. Class VIII., heifer calves, above five and not exceeding twelve months old, best, $82; second, $55; third, $27; 14 entered, but 13 exhibited. Total amount of premiums, $1548; total animals entered, 87, and total exhibited, 60; white rosettes attached to animals indicated first prize, crimson second, and blue third.

Ayrshires—First prize, bulls at former shows—each animal exhibited in this class receives a medium gold medal; 2 entered and 2 exhibited. Class I., bulls calved before first of January, 1871, (this list was compiled for the Show of August, 1873), premiums, $112, $55, medium and minor silver medals, (making four premiums); breeder of best bull, silver medal;

9 entered and 9 exhibited. Class II., bulls calved after first of January, 1871, premiums, $112, $55, medium and minor silver medals; 16 entered, but 13 exhibited. Class III., bulls calved after first of January, 1872, premiums, $55, $27, medium and minor silver medals; 18 entered, but 15 exhibited. Class IV., cows in milk, of any age, (the animals in this class which have not calved before the Show will be judged along with cows, in calf, of any age), premiums, $82, $44, medium and minor silver medals; 31 entered, but 20 exhibited. First prize cows at former Shows, each animal exhibited in this class receives a medium gold medal; 3 entered and 3 exhibited. Class V., cows in calf, of any age, or heifers in calf, calved before first of January, 1871, (animals in this class which have calved before the Show will be judged along with cows in milk), premiums, $82, 44, medium and minor silver medals; 14 entered, but 12 exhibited. Class VI., heifers calved after first of January, 1871, (animals in this class which have calved before the Show will be judged along with cows in milk), premiums, $55, $27, medium and minor silver medals; 18 entered, but 15 exhibited. Class VII., heifers calved after first of January, 1872, premiums, $44, $22, medium and minor silver medals; 16 entered, but 15 exhibited. Total amount of premiums, $816, medium gold, 7 medium silver, 7 minor silver and 1 silver medals; total animals entered, 126, and total exhibited, 103.

To show the encouragement offered for the breeding of agricultural (which includes draft horses in general), and also coach horses, I give the following. But my readers must remember that in Great Britain the hunting horse being used for purposes of exercise and pleasure, while in this and other states the trotting horses are by far the most generally used for purposes of pleasure, I can not well make a comparison by giving a copy of the premiums offered for hunters in Great Britain. The premiums offered by the Highland and Agricultural Society of Scotland for agricultural horses are :—

First prize stallions at former Shows—each animal exhibited in this class receives a medium gold medal; 2 entered and 2 exhibited. Class I., stallions foaled before first of January,

1870, (this list was compiled for the Show of August, 1873), premiums, $165, $82, medium and minor silver medals; breeder of best stallion, silver medal; 24 entered, but 19 exhibited. Class II., entire colts foaled after first of January, 1870, premiums, $110, $55, medium and minor silver medals; 36 entered, but 27 exhibited. Class III., entire colts foaled after first of January, 1871, premiums, $82, $44, medium and minor silver medals; 41 entered, but 33 exhibited. Class IV., entire colts foaled after first of January, 1872, premiums, $55, $27, medium and minor silver medals; 22 entered, but 18 exhibited. Class V., mares, (with foal at foot), foaled before first of January, 1870, premiums, $110, $55, medium and minor silver medals; 19 entered, but 15 exhibited. First prize mares at former Shows, exhibited for medium gold medal; 1 entered and 1 exhibited. Class VI., mares (in foal) foaled before first of January, 1870, premiums, $82, $44, medium and minor silver medals; 15 entered, but 8 exhibited. Class VII., fillies foaled after first of January, 1870, premiums, $55, $27, medium and minor silver medals; 12 entered, but 9 exhibited. Class VIII., fillies foaled after first of January, 1871, premiums, $44, $18, medium and minor silver medals; 21 entered, but 17 exhibited. Class IX., fillies foaled after first of January, 1872, premiums, $33, $16, medium and minor silver medals; 19 entered, but 12 exhibited, Class X., draught geldings foaled after first of January, 1870, premiums, medium gold, silver, medium and minor silver medals; 5 entered and 5 exhibited. Class XI., draught geldings foaled after first of January, 1871, premiums, medium gold, silver, medium and minor silver medals; 4 entered, but 3 exhibited. Total amount of premiums, $1084, medium gold, 1 silver, 11 medium silver and 11 minor silver medals; total animals entered, 221, and total exhibited, 169.

The premiums offered by the Yorkshire Agricultural Society for coach horses are: Class I., coaching stallions, $55, $27; 10 entered, but 9 exhibited. Class II., two year old geldings, $55, $27; 8 entered and 8 exhibited. Class III., two year old fillies, $38, $16; 4 entered, but 3 exhibited. Class IV., three

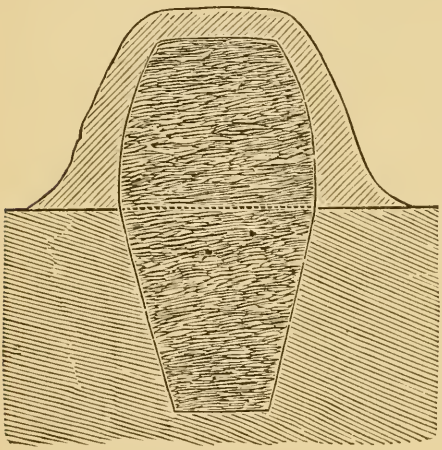
year old geldings, $82, $27; 12 entered, but 11 exhibited. Class V., three year old fillies, $55, $27; 4 entered and 4 exhibited. Total amount of premiums, $327; total animals entered, 28, and total exhibited, 26.

While making a short but most interesting visit to a Hungarian acquaintance, I was shown, among other things, a way of curing fodder-corn that I know must be new to most of my readers, and wishing to make it known to them I had intended to write of it now. My Hungarian friend has, however, adopted my suggestion and has himself written a description of it for the "American Agriculturist," which I copy. The fodder is cut for use in a manner similar to that in which hay is cut from a stack.

"Sour-Fodder Making. The curing of various kinds of green fodder into sour hay is perhaps in the United States a not commonly practiced manipulation, especially the souring of green corn, which should be practiced with more effect on the farms of the United States of America. The making of dry hay of green is an injurious manner of curing it. Although the writer of this is not acquainted with American farming, except by reading the American Agriculturist, nevertheless I communicate a method of preservation of juicy fodder, peculiarly important for corn-producing America.

"The corn is sown broadcast, or drilled in rows nine to eighteen inches apart, two mezins to one Austrian toch, (or about 3.3 hectolitre to one hectare.) [This is nearly three and one-half bushels to the acre.] The cultivation remains the same; the field must be kept free from weeds. At blossom time the corn is mown, loaded into wagons, and hauled in. The home-brought corn is put in large ditches, (German, Grube Miethe,) ten or twenty rods long, and is here pressed in by a few men walking on the green corn. The accompanying engraving will explain the whole. The ditch is twelve feet deep, twelve feet wide at the top, and six feet at the bottom. The length will need to be sufficient to contain the fodder to be preserved. The ditch must be dug in dry ground. When the ditch is filled, the green corn is built like a stack upwards,

about ten feet over the level of the ground, as shown in the engraving. The finished stack is then covered with earth about two feet thick on every side. It is best to cover the top of the stack at first, because the weight of the earth pressing down the green corn, as much earth is not needed for covering as is the case when the sides are covered at first.



DITCH FOR THE CORN.

"This sour-hay making enables us to store a large quantity of juicy fodder for the winter, and if well covered with earth it may be stored for a few years without any injury. The most important of all is, the beasts being once acquainted with this sour hay like it very much. With us (in Hungary) the sour hay is cut and mixed with corn-meal, or some other ground grain, and given to the cattle, but the sour hay may be fed uncut also.

"In sections where stones and bricks are to be obtained chiefly, the sides of the ditch may be walled, but it is not necessary.

"I should be very glad if these lines would serve to encourage the sour-hay making of corn by the American farmers."
—*American Agriculturist for October*, 1873. G. C.
*Albrchtsfeld, Hungary.*

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## HINTS AND SUGGESTIONS ON MANAGING THE FARM.

BY CHARLES J. PEABODY.

How can a young man with a small farm and but little money make more than it costs to live? A difficult question to

answer, as not only have the situation and soil of the farm to be considered, but the disposition of the owner also.

I purpose at this time to discuss what can be done by farmers having from fifty to eighty acres of good land, in the central or western part of the County. A fair valuation of such land in my neighborhood is $40 per acre for pasture land, and $75 to $125 for fielding, and I suppose about the same in other sections of the county.

To this discussion I come with but a limited experience; and, though I have given much thought to the subject, as every one must to his constant employment, the conclusions to which I have come are doubtless somewhat imperfect, as time enough has not elapsed to thoroughly test them in the field. And many men have found that if all that can be done on paper could be made equally satisfactory and profitable on the farm, we should not need to pursue the subject of this essay any further, since by availing ourselves of a few books we could all be wealthy and wise.

I have no plan to offer which is original with myself, for I believe the best chance of success is found in looking into the methods of those who have been prosperous, and copying the best points of their systems into our practice.

In doing this care must be used that the changes attempted are not on so large a scale as to embarrass one, if any unexpected circumstance should prevent its being as profitable as was expected. This is especially true of new crops, as frequently the experience of several summers is needed to enable one to grow them at a profit.

The great difficulty in our farming operations is the scarcity of good help. I put it on the basis of *scarcity*, not *cost*, of labor, as is frequently done; for I think the relative wages of farm laborers to-day are no higher, when compared with the prices of farm produce, than they were when good men received fifteen dollars per month for the season of six or eight months, and extra help could be had in haying for half the present price. A partial remedy for this is found in the use of horse labor for many operations which were once done by

hand. Nor is the use of the horse confined to the hay-field, but every year it is found that some new work can be done as well by horse as by man power.

For instance, many men who raise large crops of potatoes cover them with a light plow drawn by a single horse, thus doing the work rapidly and well. I find that even on heavy land this method works well, if a little care is taken to go over the ground and level the top of the furrow, where lumps of earth or stones rest upon it.

It will be seen that if a change of this kind can be made, and this branch of work quickly disposed of, attention can be given to other work and thus a start obtained on the season's work, that will be appreciated as the weeks pass. Another point on which opinion is changing is in regard to the amount of land it is best to plant; the old custom of many acres and medium crops is giving way to the system of Europe, and conforming to the practice of the gardeners near our cities, which is to put on to one acre all the manure and labor the old way gave to four, and getting a crop equal to the larger lot.

The old story of the man who left his sons a treasure buried in a field, which they were to find by digging, will apply to Essex County as well as elsewhere. Some recent writer has said that most men reckon only the superficial area of their farms, as if they had a title to but a few inches in depth, forgetting that often a soil may be made much more productive by cultivating below the level at which it has usually been worked.

The author of "My Summer in a Garden" says he derived great pleasure in thinking that though he had but a small piece of land on the surface of the earth, yet he owned clear through to China. Even if we do not care to go in quite so deep as he did, we may with advantage work deeper than many of us have been in the habit of doing.

I find that so fully are some of our best nursery-men convinced of benefit resulting from deep culture, that they take pains to trench the soil of the beds in which they grow their sample plants and shrubs to a depth of two feet, claiming that

the extra expense of cultivating the ground is more than repaid by the increased vigor of the plants. The experience of our onion growers points in the same direction, as they find that the more thoroughly the soil is prepared the more profitable is the crop ; and the best results are not obtained till years of careful culture have been given to a field.

It may now be considered as proved that one acre well worked is more profitable, as well as more enjoyable, than two half cared for ; therefore let us strive in friendly rivalry to see who shall have, not the *most* acres, but the *best*. Here is another consideration in favor of small farms, the taxes are less, and while we may double the value of our land by high farming, we do not have to pay for it as we should if we increased the number of acres.

From the cultivation of the soil we pass easily to the consideration of the team with which we cultivate. Whether for this oxen or horses are best must depend largely on the character of the soil and also to what use the animals can be put when not at work on the farm. For my own use I prefer oxen, because, although slow compared with horses, they are sure and much less expensive both in first cost and also in maintenance, while if disabled by accident the loss is slight (as they are of value for beef) to what the loss of a horse is under similar circumstances. They are also more easily obtained when extra team is wanted for a short time, and may often be fattened and sold at a good profit when the work is done, while horses are hard to dispose of as well as to obtain.

Many persons would be surprised at an attempt to educate oxen beyond the point of making them understand the meaning of the words employed to direct their movements. I have satisfied myself that they can learn much more than this, and that time spent in training a yoke of oxen that one intends to keep for a length of time is well employed, as the intelligent labor of an animal, as of a man, gives the best results.

In view of the advantages resulting in many instances from underdraining, it is well for us to inquire if we may not with profit do something by this process to make the wet lands of

our farms more productive. If we have not the capital to make extensive and thorough work with tiles, most of us can make a beginning with the small stones that have accumulated during past years; for these will make a good drain if laid with care.

There are those who say that on springy land it will pay to drain the whole farm. I think, however, it is not proved as yet, that for common farming the return would exceed the outlay. We are, however, likely to learn from the experiments of the gentlemen who, with ample resources, combined with a love for farming, are working out for us in Ipswich, Hamilton and West Peabody, not to mention other places in the county, so many valuable results in this matter of draining, and also in the application of commercial fertilizers and home-made composts, giving us from year to year the conclusions and the data from which they are drawn, thus aiding us, who are *unable* to enter the field of costly expenditure, to determine what will pay. It is a common custom to sneer at the fancy farming of such men. I think we are under obligation to them for the introduction of fine stock, new crops and the experiments to which I have referred.

How much of interest is added to our annual shows by the choice animals of these wealthy farmers. Even if we do not care or can not afford to own such ourselves, yet we enjoy looking at them and judging of their adaptability to our use by the record they make.

As an illustration of the benefit conferred by this class of farmers in past years upon their neighbors of more limited means, I would cite the introduction of Jersey stock. Nearly every one admits that for dairy purposes they are unequalled, and I find that a grade Jersey will sell for more money than a common cow. It is also much in their favor that for common use, with ordinary care and keeping, the grades are better than the thorough-breds.

For this improvement in our stock we are indebted to *fancy* farmers. Who else would have incurred the expense of importing cattle, and on their arrival offered such facilities for the diffusion of the blood among the herds of their vicinity?

We will now endeavor to suggest some characteristics of the man who will be likely to prosper in his business, as they are shown in the records of old time and set forth in the writings of those who, from their position, are always listened to with regard; and endeavor to combine these with such facts as I have been able to gather from the men who are good farmers around me, and from my own experience.

I find the difficulty we experience in Essex County to-day of getting active men to work for us is not new, and the principle that to be fit to rule farms or cattle men must be smart, is as old as the time of Pharaoh, who said to Joseph, if thou knowest any men of *activity* among thy brethren make them rulers over my cattle. The garden of the slothful man, with the condition of its crops, is also on record somewhat further along in the same book. I think this activity to give the best results should be continued through the winter, by doing some outside work, such as teaming wood or timber, or almost any job that offers employment and pay for time that cannot be well used at home.

This should not be pushed to an extreme, for to be wise in the development of one's powers some time in the winter must be spent over books and with friends, or else the usefulness of the man will be little more extensive than the area of his farm.

Another point to be regarded is the value of time in the busy seasons of the year. We all find that work drives if the spring is late, and hoeing and haying come together; when this happens, we must make the best of it and make every hour tell on the work. Something may be done in preparation for the season of hurry by having tools in order, all farm machinery made ready in advance, so that when the rush comes on we can start the mower without spending hours in getting it into running order. In furtherance of this design, it will pay to keep all small tools in particular places, and after using them put them where they belong.

A little care expended at night in looking over the tools used during the day, in cleaning plows, and hanging up chains and harness, so that in the morning, (which according to the

proverb has gold in its mouth,) no time shall be lost, is the best way, I have found, to keep things square, " with the work right up to the season's front " from day to day.

There yet remains a subject which, if not so important in a pecuniary aspect as some we have considered, is still quite as likely to affect the farmer's reputation among those who are not particularly familiar with farming, as any we have discussed. I refer to keeping the premises, and particularly the door-yard, neat and trim. On most farms there is no necessity for having a brush-pile in front of the house, nor all the old carts and sleds assembled as if they were the chief attraction of the homestead. Such things we see more often than is to the credit of our fraternity. If we must clutter, let us keep it out of sight as much as possible, for both strangers and thrifty farmers will mark us down in the scale if we are negligent in this regard.

In closing this article, if I were asked to write down the secret of profitable farming, I should like to call your attention to the sentiment expressed by Steele, in a letter to the Spectator, under date of Jan. 23, 1712, which is as follows:—" He who promises himself anything but what may naturally arise from his own property or labor and goes beyond the desire of possessing above two parts in three even of that, lays up for himself an increasing heap of afflictions and disappointments." How significant these words to-day, in this panic of those who make haste to be rich by speculation and fraud.

Since to our labor we look, we must be active, must know that time is precious, and learn to be quick, for there are so many duties to attend to that, with all the machinery of modern farming, we shall fail to realize the benefit of the statement that " much increase is by the strength of the ox," unless we apply that executive ability to all departments of our work, which has ever characterized those whose success has made them famous in any of the industrial pursuits of the world.

The counsel which Dickens puts into the mouth of one of his wise old men, who is advising a nephew about to start in life, is worthy the careful study of all young men. He says:—

"The world is before you, as you enter it so will it receive you; if you had the abilities of all the great men past and present, you could do nothing well without sincerely meaning it and setting about it. If you entertain the supposition that any real success in great things or in small ever *was* or could be, *ever* will or can be wrested from Fortune by fits and starts, leave that wrong idea here."

The man who wants a leisure life had better keep out of farming in all its branches; but the man who believes "that his own right arm shall make him king," not king over men in the sense in which the words were written, but king over difficulties and obstacles in his path; the man who knows something of the feeling of the Scotch poet who "walked in glory and in joy behind his plow along the mountain side;" the man who has the skill and patience to make two blades of grass grow where one grew before; to him we say, "All hail." Welcome the day when by the efforts of such men the care of our farms shall be considered as honorable and as worthy the best efforts of the best men as the care of banks or the affairs of commerce.

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## FARM ACCOUNTS.

BY FRANCIS H. APPLETON.

In presenting these accompanying farm accounts, it will be necessary to preface them with a few explanations. I present them, hoping that they will be the means of drawing forth comments from practical farmers and others, and if they shall do only a very small part towards advancing scientific investigations in agriculture, I shall be much pleased. I would say to the farmers that every agricultural truth, and by that I mean any information that is not based upon guessing, (which unfortunately is the way too many farmers base their information,) that they can give to the public through the agricultural or other papers, will help greatly in establishing agriculture as a science.

My accounts are presented in a form that I, at the present time, believe will make most of them explain themselves.

Not having been able to keep such a record as would enable me to ascertain the exact amount of labor, and use of horses or oxen, expended upon each crop, and thus determine what I ought to charge to each crop, etc., for it, I have estimated these amounts, having consulted the most reliable sources of information on that subject within my reach.

Knowing, however, that, on different kinds of soil, and with the cost of labor varying in different localities, money figures that might be true in one community would not be true in another, I expect that my estimates in this respect will not seem correct to every one. In charging the labor to the Live Stock account, I have included the labor consumed in delivering the manure upon the fields, and have credited the Live Stock with all the manure hauled from barn-cellar at about $10 per cord. You will notice that my stock consume much grain, which increases the fertilizing power of their manure.

In estimating the amount to charge for use of implements, I have ascertained the cost of repairs, and their depreciation in value during the year, and have apportioned it among the different crops, etc., according to the amount of land occupied by each crop.

I charge all the manure applied to a piece of land to the next succeeding crop, making no allowance for that part of the manure which is not consumed by that crop. My reasons are that, although we can ascertain with much accuracy either by an analysis of the crop after it is harvested, or by reference to tables containing averages of many analyses of various crops, (see appendix to "How Crops Grow," by S. W. Johnson, M. A.,) how much manure is taken up by any crop, and thereby know how much of the manure is left unaccounted for, we can not tell how much of this manure that is left unaccounted for will be available for future crops, and how much will be lost by leaching, or other causes.

I therefore seed down to grass after the condition of the land has been improved by cultivated crops, or otherwise, and let

the profit and loss account show the true profit or loss on the farm, in addition to the value of the labor, wear and tear of implements, etc., that has been expended on the supposed improvements of the farm, with the intention of letting a future year prove whether such supposed improvement was real or imaginary. I should also add that one source of profit is not shown in my accounts, namely, the pleasure and healthful exercise derived from life in the country.

Successful farming depends on so many things, with our present system of farming, that its profits or losses cannot be ascertained in a single year. The weather of one year may be such that either the profits are made small or a loss sustained, and the next year may be so successful that the case is changed, and the profits be such, perchance, as to more than make up for the losses of a previous year.

It is often the case on some farms that the true profit and loss is ascertained only by casting the balance from the accounts of several years at once.

Sometimes a tract of land is bought with the intention of making it a residence for the owner, or with the expectation that it will come into the market at a future day for house lots, and it is farmed to help pay the interest and taxes on it, the price paid being high, and the profits, if looked for as in the latter case I mention, expected to be returned at some future day.

Thus the profit and loss account must be kept open, sometimes for a long period of years, until the land has been all sold, to show the true profit on the investment.

No profit can be derived from farming on poor land, and hence the cause of emigration from the East to the West to obtain the fertile land at small cost; and thus we see the need of scientific agriculture in the East which shall show what system we must adopt to improve our unproductive lands and make them capable of doing all that is possible towards supplying our wants, and we ourselves must do all we can in this way to keep at home those who have grown up and been educated in the East and for whose education our citizens have

been taxed, that we may derive some benefit from their learning. I am convinced that the only way for the farmer to find out whether he is gaining or losing is to keep accounts similar to those which I present. If his accounts show him that he is losing, let him carefully and quickly consider what is the cause of his loss, and when he has found it out let him strive to remedy it. It may be traced, among other things, to misapplied labor or manure, or to the poor condition of the land.

To refer to my grain account, you will notice that the average cost of my oats used during the year was about 60 4-10 cents per bushel; of my Indian meal used was nearly 75 1-2 cents per bushel; of my shorts was $32.30 per ton.

My manure account, which shows what manure I have bought, tells you that I have used several kinds of commercial fertilizers, but as to their power I should be unwilling to give advice, as the weather of last year was such that everything either showed remarkably good growth, or was injured by the wet season, so as to conceal any noticeable effect of the fertilizers applied. Another year I hope my experience will be more satisfactory in this respect.

I should generally use less Nitrate of Soda, and larger quantities of more lasting sources of Nitrogen; using the former, which is very soluble, quick acting and soon used up, when Nitrogen is wanted as a stimulant.

The Phosphatic Blood Guano is a refuse of slaughter houses in a more condensed form, and bears the test of chemical analysis well, which shows that it contains much useful fertilizing power.

All the fertilizers that I have named or bought can be obtained in Boston. Muriate of Potash is a good source of Potash when it cannot elsewhere be obtained on more reasonable terms.

The market value of commercial fertilizers varies somewhat, but if we know the constituent parts of them, the price will guide us as to which fertilizer to select, where two or more would answer a purpose equally well.

I give below a list of my animals and the number of days

they have been in my barn dnring the past year, which includes all my stock, except three boarding horses, of which I cannot tell the number of days that they were in my barn. I also give the number of pounds of milk sold from each cow, with the approximate age of each of my Ayrshires, and the number of days that they suckled their calves. I have made no account of several calves that were killed immediately after birth, which I was unable or did not wish to raise. By referring to the last column you can ascertain what my stock consisted of, Jan. 1, 1873.

| Names. | Approximate age in years, Jan. 1, 1873. | Days on Farm. | Pounds Milk sold. | No. days suckling calf. | Remarks, |
|---|---|---|---|---|---|
| Bull "Lord Avondale," | 2 | 366 | | | |
| Cow "Maud," | 9 | 366 | 8582¼ | 3 | |
| " "Lily Dale," | 4 | 366 | 8984½ | | |
| " "Rose Douglas," | 4 | 37 | 543 | | |
| " "Effie Douglas," | 2 | 37 | 739 | | |
| " "Lassie," | 4 | 366 | 5591 | 3 | |
| Heifer "Lady Essex," | 2 | 366 | 663 | 43 | |
| " "Peabody Belle," | 1 | 366 | | | |
| Bull-calf "Charles," | 1-6 | 96 | | | |
| " "Corporal," | 1-3 | 157 | | | |
| " "Harry," | 1 | 120 | | | Sold. |
| Grade Cow, (3-4 Ayrshire,) | | 298 | 6912 | | |
| " " | | 366 | 7601½ | | |
| " " | | 340 | 6980 | | |
| " " | | 310 | 6835¾ | | |
| " " | | 344 | 6886 | | Sold. |
| 1 pair Horses, | | 366 | | | |
| 1 " Oxen, | | 55 | | | Sold. |
| 1 " " | | 46 | | | |
| 6 fattening Pigs, | | 120 | | | Sold. |
| 5 " " | | 244 | | | |
| | | | 60,318 | | |

I give below the total yield of most of my cows for the whole year 1872, which I have been able to do with much accuracy :—

Maud, 8,582 1-4 lbs.; Lily Dale, 8,984 2-4; Lassie, 5,591; Grade Cow, (3-4 Ayrshire,) 9,530; Grade Cow, 7,601 1-2; Grade Cow, 7,592; Grade Cow, 8,179 3-4; Grade Cow, 7,293 1-4.

## LAND.

| | | | Dr. |
|---|---|---|---|
| 1872. | Jan. 1. | To value of land | $5621 52 |
| | | land bought | 1503 50 |
| | | interest and taxes | 444 90 |
| | | | $7569 92 |
| 1873. | Jan. 1. | To value 162 acres land | 7125 02 |
| | | | Cr. |
| 1872. | | By crops raised for interest and tax on land | $231 37 |
| 1873. | Jan. 1. | value of land | 7125 02 |
| | | Profit and Loss, for loss of interest | 213 53 |
| | | | $7569 92 |

## BUILDINGS.

| | | | Dr. |
|---|---|---|---|
| 1872. | Jan. 1. | To value of buildings | $9000 00 |
| | | carpentering, etc. | 314 19 |
| | | Labor on buildings | 20 00 |
| | | Live Stock, for use of horses | 5 00 |
| | | Implements, for use of | 3 00 |
| | | interest and taxes | 599 50 |
| | | | $9941 69 |
| 1873. | Jan. 1. | To value of buildings | 9320 00 |
| | | | Cr. |
| 1872. | | By Live Stock, for interest and taxes on barn, etc | $333 06 |
| | | Labor for interest and taxes on house and shed | 266 44 |
| 1873. | Jan. 1. | value of buildings | 9320 00 |
| | | Profit and loss, for repairs | 22 19 |
| | | | $9941 69 |

## IMPLEMENTS.

| | | | Dr. |
|---|---|---|---|
| 1872. | Jan. 1. | To value of Implements | $1035 30 |
| | | repairs and new stock | 341 00 |
| | | | $1376 30 |
| 1873. | Jan. 1. | To value of implements | 1215 08 |
| | | | Cr. |
| 1872. | | By loan of hay wagon | $1 00 |
| | | crops raised, highways and buildings for use of implements | 151 44 |
| 1873. | Jan. 1. | valuc of implements | 1215 08 |
| | | Profit and loss | 8 78 |
| | | | $1376 30 |

## LIVE STOCK.

| | | | | | Dr. |
|---|---|---|---|---|---|
| 1872. | Jan. 1. | To value of Live Stock | | | $1785 00 |
| | | Live Stock bought | | | 1148 00 |
| | | interest and taxes | | | 144 51 |
| | | Hay and Pasture, for 54,217 lbs. English hay and clover | 1146 33 | | |
| | | 13,771 lbs. Meadow Hay | 137 71 | | |
| | | 5000 lbs. Salt Hay | 62 50 | | |
| | | 2000 lbs. Weeds and Straw | 5 00 | | |
| | | Use of Pasture | 100 00 | 1451 54 | |
| | | Buildings for interest and taxes | | 333 06 | |
| | | Ruta Bagas, 4619 lbs. | | 19 65 | |
| | | Winter Rye, fed green | | 50 00 | |
| | | Root Crop, for 1440 lbs. Mangolds | 46 94 | | |
| | | 23,100 lbs. Carrots | 132 42 | 179 36 | |
| | | Fodder Corn, for 4000 lbs. cured | 20 00 | | |
| | | 1 acre fed green | 23 97 | 43 97 | |
| | | Grain, for 513 bushels Indian Meal | 286 64 | | |
| | | 369 bushels Oats | 222 95 | | |
| | | 15,037 lbs. Shorts | 242 91 | | |
| | | 600 lbs. Linseed Meal | 16 50 | 869 00 | |
| | | Expenses | | 120 32 | |
| | | Labor | | 600 00 | |
| | | | | | $6744 41 |
| 1873. | Jan. 1. | To value of Live Stock | | | 2628 00 |

| | | | Cr. |
|---|---|---|---|
| 1872. | By 60,318 lbs. Milk | | $1384 73 |
| | crops raised for manure | | 175 08 |
| | crops raised, for highways and buildings, for use horses | | 182 85 |
| | Live Stock sold | | 474 25 |
| | boarding Horses | | 80 00 |
| | value of Live Stock | | 2628 00 |
| | Profit and Loss | | 1819 50 |
| | | | $6744 41 |

## HAY AND PASTURE.

| | | | Dr. |
|---|---|---|---|
| 1872. | Jan. 1. | To 1800 lbs. English hay and clover | $270 00 |
| | " " | 5000 lbs. Salt Hay | 62 50 |
| | " " | 2000 lbs. Weeds and Straw | 5 00 |
| | " " | seed | 61 09 |
| | | 35,917 lbs. English Hay | 628 83 |
| | *Amount carried forward* | | $1027 42 |

| | | | | | |
|---|---|---|---|---|---|
| | | *Amount brought forward* | | | $1027 42 |
| | | 8771 lbs. Meadow Hay | | | 87 71 |
| | | seed | | | 18 15 |
| | | Manure for 303 lbs. Peruvian Guano | | 12 82 | |
| | | 500 lbs. Nitrate Soda | | 12 18 | |
| | | 200 lbs. Bone Black | | 3 63 | |
| | | 1000 lbs. Ground Bone | | 30 75 | 69 33 |
| | | salt | | | 1 50 |
| | | Labor | | | 200 00 |
| | | Live Stock, for use of horses | | | 50 00 |
| | | Implements, for use of | | | 50 00 |
| | | Land, for interest | | 163 03 | |
| | | taxes on hay land | | 15 33 | 178 36 |
| | | Profit and Loss | | | 1089 00 |
| | | | | | $2771 61 |
| 1873. | Jan. 1. | To value of crop, etc | | | 1320 07 |
| | | | | | CR. |
| 1872. | | By Live Stock | | | $1451 54 |
| 1873. | Jan. 1. | By value of crop, etc.,—1500 lbs. 1871,—hay crop | | 22 50 | |
| | | 81,320 lbs. English hay and clover | | 1219 80 | |
| | | 2000 lbs. Meadow Hay | | 30 00 | |
| | | 27 lbs. Red Clover seed | | 3 24 | |
| | | 16 lbs. White Clover seed | | 8 00 | |
| | | 10 lbs. Alsike Clover seed | | 5 00 | |
| | | 2½ bush. Timothy seed | | 14 53 | |
| | | 8½ bush. Red Top seed | | 17 00 | 1320 07 |
| | | | | | $2771 61 |

RUTA BAGA.

| | | | | | |
|---|---|---|---|---|---|
| | | | | | DR. |
| 1872. | Jan. 1. | To 3600 lbs | | | $15 43 |
| | | seed | | | 30 |
| | | Manure | | | 5 82 |
| | | Live Stock for manure | | | 9 03 |
| | | Use Horses | | | 1 76 |
| | | Labor | | | 9 16 |
| | | Implements, for use of | | | 1 22 |
| | | Land, for taxes and interest | | | 74 |
| | | | | | $43 51 |
| 1873. | Jan. 1. | To value of crop | | | 12 69 |
| | | | | | CR. |
| 1872. | | By Live Stock | | | 19 65 |
| 1873. | Jan. 1. | value of crop, 3056 lbs | | | 12 69 |
| | | Profit and Loss* | | | 11 17 |
| | | | | | $43 51 |

* Including value of manure left in land by crop of 1872.

## WINTER RYE.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | | To Manure | | $70 00 |
| | | Labor | | 8 00 |
| | | Implements, for use of | | 5 82 |
| | | Land, for taxes and interest | | 6 00 |
| | | | | $89 82 |
| | | | | Cr. |
| 1872. | | By 9 bush. Rye | | $9 00 |
| | | Live Stock | | 50 00 |
| | | Profit and Loss* | | 30 82 |
| | | | | $89 82 |

## ROOT CROP.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | Jan. 1. | To 1440 lbs. Mangolds | | $46 94 |
| | | 18,865 lbs. Carrots | | 106 37 |
| | | seed | | 5 90 |
| | | Manure | | 96 67 |
| | | Labor | | 82 00 |
| | | Live Stock, for use horses | | 15 00 |
| | | Implements, for use of | | 9 21 |
| | | Land, for taxes and interest | | 2 98 |
| | | Profit and Loss | | 2 56 |
| | | | | $367 63 |
| 1873. | Jan. 1. | To value of crops, etc | | 188 27 |
| | | | | Cr. |
| 1872. | | By Live Stock | | $179 36 |
| 1873. | Jan. 1. | value of crop*†, 21,581 lbs. Mangolds | 89 57 | |
| | | 15,400 lbs. Carrots | 92 40 | |
| | | use horses, crop 1873 | 3 00 | |
| | | use implements, crop 1873 | 1 30 | |
| | | labor, crop 1873 | 2 00 | 188 27 |
| | | | | $367 63 |

* Carrot crop rotted badly.

† Not including value of manure left in land by previous crops.

## FODDER CORN.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | Jan. 1. | To 3000 lbs | | $15 00 |
| | | seed | | 10 00 |
| | | Manure | | 86 04 |
| | | Labor | | 25 80 |
| | | Live Stock, for use horses | | 8 00 |
| | | Implements, for use of | | 8 13 |
| | | Land, for interest and taxes | | 3 74 |
| | | | | $156 71 |

* Including value of manure left in land by crop of 1872.

| | | | | |
|---|---|---|---|---|
| 1873. | Jan. 1. | To value of crop | | 26 70 |
| | | | | Cr. |
| 1872. | | By Live Stock | | $43 97 |
| 1873. | Jan. 1. | value of crop, 5340 lbs | | 26 70 |
| | | Profit and Loss* | | 86 04 |
| | | | | $156 71 |

ONION.

| | | | | |
|---|---|---|---|---|
| | | | | Dr. |
| 1872. | | To Manure | | $120 61 |
| | | Bbls. and seed | | 32 00 |
| | | Live Stock, for manure for crop 1873 | | 90 00 |
| | | Live Stock, for use of horses | | 15 00 |
| | | Labor | | 95 00 |
| | | Implements, for use of | | 10 91 |
| | | Land, for interest and taxes | | 2 99 |
| | | | | $366 51 |
| 1873. | Jan. 1. | To value crop, etc | | 122 11 |
| | | | | Cr. |
| 1872. | | By crop sold | | $168 91 |
| 1873. | Jan. 1. | value crop, etc., 5086 lbs. Ruta Bagas | 21 11 | |
| | | manure hauled for crop 1873 | 90 00 | |
| | | use horses, crop '73 | 3 00 | |
| | | use implements, crop '73 | 3 00 | |
| | | labor, crop '73 | 5 00 | 122 11 |
| | | Profit and Loss† | | 75 49 |
| | | | | $366 51 |

POTATO.

| | | | | |
|---|---|---|---|---|
| | | | | Dr. |
| 1872. | | To Manure | | $313 32 |
| | | bbls., seed, etc | | 65 12 |
| | | Labor | | 81 24 |
| | | Live Stock, for use horses | | 28 09 |
| | | Implements, for use of | | 31 79 |
| | | Land, for taxes and interest | | 13 34 |
| | | | | $532 90 |
| 1873. | Jan. 1. | To expenses for crop '73 | | 12 70 |
| | | | | Cr. |
| 1872. | | By crop sold | | $278 90 |
| | | expenses for crop '73: | | |
| | | labor | 4 00 | |
| | | use horses | 6 00 | |
| | | use implements | 2 70 | 12 70 |
| | | Profit and Loss‡§ | | 241 30 |
| | | | | $532 90 |

* Including value of manure left in land by crop of 1872.
† Including value of manure left in land by previous crops.
‡ Including value of manure left in land by crop of 1872.
§ Crop rotted badly.

## HUNGARIAN GRASS.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | | To 2 bushels seed | | $8 65 |
| | | Live Stock, for manure | | 60 00 |
| | | use horses | | 10 00 |
| | | Labor | | 6 00 |
| | | Implements, for use of | | 6 91 |
| | | Land, for taxes and interest | | 2 99 |
| | | | | $94 55 |
| 1873. | Jan. 1. | To value of crop, etc | | 60 92 |
| | | | | Cr. |
| 1873. | Jan. 1. | By value crop, 6000 lbs | 54 00 | |
| | | 1 1-5 bushels seed | 6 92 | 60 92 |
| | | Profit and Loss‡ | | 33 63 |
| | | | | $94 55 |

## FOREMAN'S GARDEN.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | Jan. 1. | To Manure | | $7 50 |
| | | Live Stock, for manure | 16 00 | |
| | | for use horses | 6 00 | 22 00 |
| | | Implements, for use of | | 4 45 |
| | | Land, for interest and taxes | | 1 49 |
| | | | | $35 44 |
| 1873. | Jan. 1. | To value of Turnips | | 6 23 |
| | | | | Cr. |
| 1873. | Jan. 1. | By value or 1500 lbs. Turnips | | $6 23 |
| | | Labor | | 29 21 |
| | | | | $35 44 |

## FIELD, NO. 3.

| | | | Dr. |
|---|---|---|---|
| 1872. | | To Manure | $44 16 |
| | | Labor | 35 00 |
| | | Live Stock, use of horses and oxen | 20 00 |
| | | Implements, for use of | 15 00 |
| | | Land, for interest and taxes | 18 74 |
| | | | $132 90 |
| 1873. | Jan. 1. | By value of labor, manure, etc | 132 90 |
| | | | Cr. |
| 1873. | Jan. 1. | To value labor, manure, etc | $132 90 |
| | | | $132 90 |

‡ Including value of manure left in land by crop of 1872.

## HIGHWAYS.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | | To Labor | | $42 00 |
| | | Live Stock, for use of horses and oxen | | 24 00 |
| | | Implements, for use of | | 9 00 |
| | | | | $75 00 |
| | | | | Cr. |
| 1872. | | By Profit and Loss | | $75 00 |
| | | | | $75 00 |

## LABOR.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | | To cash paid | | $1892 00 |
| | | Foreman's Garden | | 29 21 |
| | | Buildings | | 266 44 |
| | | | | $2187 65 |
| | | | | Cr. |
| 1872. | | By crops raised, Highways, Buildings, and Live Stock | | $1204 20 |
| | | Profit and Loss | | 983 45 |
| | | | | $2187 65 |

## GRAIN.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | Jan. 1. | To 19 bushels oats | | $11 25 |
| | | 4 bushels indian meal | | 3 50 |
| | | 600 lbs. linseed meal | | 16 50 |
| | | 410 bushels oats | | 244 70 |
| | | 550 bushels indian meal | | 414 92 |
| | | 15,537 lbs. shorts | | 250 41 |
| | | | | $941 28 |
| 1873. | | To value of grain in barn | | 72 28 |
| | | | | Cr. |
| 1872. | | By Live Stock | | $869 00 |
| 1873. | Jan. 1. | By value of grain in barn: | | |
| | | 41 bushels indian meal | 31 78 | |
| | | 60 bushels oats | 33 00 | |
| | | 500 lbs. shorts | 7 50 | 72 28 |
| | | | | $941 28 |

## MANURE.

| | | | | Dr. |
|---|---|---|---|---|
| 1872. | Jan. 1. | To manure on hand | | $624 00 |
| | " " | 2000 lbs. Muriate of Potash | | 69 10 |
| | " " | 12 casks lime | | 16 20 |
| | | 506 lbs. Peruvian Guano | | 21 19 |
| | | 884 lbs. Nitrate of Soda | | 39 21 |
| | | 1000 lbs. Phosphatic Blood Guano | | 56 06 |
| | | 1650 lbs. Bone Black | | 21 81 |
| | | 1000 lbs. Ground Bone | | 30 75 |
| | | | | $878 32 |

| | | | | |
|---|---|---|---|---|
| 1873. | Jan. 1. | To value of fertilizers in barn | | 64 82 |
| | | | | Cr. |
| 1872. | | By Hay and Pasture | | $69 38 |
| | | Ruta Baga | | 5 82 |
| | | Winter Rye | | 70 00 |
| | | Root Crop | | 96 67 |
| | | Fodder Corn | | 86 04 |
| | | Onion | | 120 61 |
| | | Potato | | 313 32 |
| | | Foreman's Garden | | 7 50 |
| | | Field No. 3 | | 44 16 |
| 1873. | Jan. 1. | value of fertilizers in barn, 200 lbs. Peruvian Guano | 8 37 | |
| | | 1000 lbs. Muriate of Potash | 34 55 | |
| | | 84 lbs. Nitrate of Soda | 3 72 | |
| | | 1450 lbs. Bone Black | 18 18 | 64 82 |
| | | | | $878 32 |

INSURANCE.

| | | | |
|---|---|---|---|
| | | | Dr. |
| 1872. | Jan. 1. | To cost of insurance on buildings and hay | $95 90 |
| | | insurance of hay | 15 00 |

PROFIT AND LOSS.

| | | | |
|---|---|---|---|
| | | | Dr. |
| 1872. | | To Land, for loss of interest | $213 53 |
| | | Buildings, for repairs | 22 19 |
| | | Implements* | 8 78 |
| | | Live Stock | 1819 50 |
| | | Ruta Baga* | 11 17 |
| | | Winter Rye* | 30 82 |
| | | Fodder Corn* | 86 04 |
| | | Onion* | 75 49 |
| | | Potato* | 241 30 |
| | | Hungarian Grass* | 33 63 |
| | | Highways | 75 00 |
| | | Labor† | 983 45 |
| | | | $2600 90 |
| 1873. | Jan. 1. | To balance‡ | 2509 25 |
| | | | Cr. |
| 1872. | | By hay and pasture | $1089 09 |
| 1873. | Jan. 1. | Root Crop | 2 56 |
| | | By balance‡ | 2509 25 |
| | | | $3600 90 |

* Including value of manure left in land by previous crops.

† Labor employed in all improvements, clearing land, thinning woodland, etc.

‡ Including value of all improvements on farm during 1872, and value of manure left in land by previous crops, etc.

## Dr. EDWARD H. PAYSON, TREASURER, IN ACC'T WITH THE ESSEX AG. SOCIETY. Cr.

| | | | | |
|---|---|---|---|---|
| 1872. | | | | |
| October. | To balance of former account | | | $928 83 |
| | To Bank dividends for October | | $459 50 | |
| | To Donation from Gen. Sutton | 50 00 | | |
| | " " " citizens of Gloucester | 25 00 | | |
| | To Donation from Mr. F. H. Appleton | 25 00 | | |
| | To Donation from Col. Oliver | 10 00 | | |
| | " " " Dr. Loring | 20 00 | 130 00 | 589 50 |
| Nov. 6. | To State Bounty | | | 600 00 |
| Nov. 15. | To amount received at exhibition at Gloucester, per Committees' account | | | 1741 03 |
| Dec. 12. | To amount received of new members, per Secretary's account | | | 378 00 |
| Dec. 16. | To amount received on U. S. Bond sold | | | 1090 00 |
| 1873. | | | | |
| Jan'y 1. | To coin coupons, 16.73; coupons Essex R. R., 21.00 | | | 37 73 |
| | To dividend of First National Bank of Salem | | | 108 00 |
| | To Donation of F. H. Appleton | | | 25 00 |
| March 5. | To amount received on U. S. Bond sold | | | 582 50 |
| April. | To amount of April Bank dividends | | | 503 00 |
| July 1. | To coupons Essex R. R., 21.00; dividend First National Bank, Salem, 108.00 | | | 129 00 |
| Sept. | To rent of Treadwell Farm | | | 250 00 |
| | To amount of premiums unclaimed | | | 349 00 |
| | | | | $7311 59 |

| | | | | |
|---|---|---|---|---|
| 1872. | | | | |
| October. | By premiums and gratuities awarded by Trustees | | | 1369 00 |
| Nov. | By cost of 4 shares in First National Bank, Salem | | | 512 00 |
| Dec. 12. | By cost of 10 shares in Salem National Bank | | | 1200 00 |
| Dec. 16. | By amount paid for Scholarships, 50.00 | | | 50 00 |
| 1873. | | | | |
| March 18. | By amount of subscription to 6 shares Salem National Bank | | | 600 00 |
| | By expenses paid at exhibition at Gloucester, per account of Committees' acc't | | | 1480 15 |
| | By Expense account as follows: | | | |
| | Of exhibition, paid by Treas. | 103 25 | | |
| | Printing, 410.10; Secretary's account, 148.70 | 558 80 | | |
| | Treadwell Farm, 43.67; rent, 25 | 68 67 | | |
| | Advertising, 3.87; express, .15 | 4 02 | | |
| | Account books, 4.00 | 4 00 | 738 74 | |
| | By balance to new account | | 1361 70 | $7311 59 |

# FUNDS BELONGING TO THE SOCIETY.

| | *Cost on the books.* | *Market value.* |
|---|---|---|
| 16 shares in the Warren National Bank | $1595 40 | |
| 15 shares in the South Danvers National Bank | 1471 25 | |
| 5 shares in the First National Bank of Danvers | 375 00 | |
| 5 shares in the National Revere Bank | 585 87 | |
| 8 shares in the National Exchange Bank, Salem | 800 00 | |
| 18 shares in the First National Bank, Salem | 1914 66 | |
| 12 shares in the Mercantile National Bank, Salem | 1226 50 | |
| 23 shares in the Merchants National Bank, Salem | 1189 50 | |
| 42 shares in the Asiatic National Bank, Salem | 1281 25 | |
| 18 shares in the Salem National Bank | 2000 00 | |
| Essex Railroad Bonds, 700.00 | 700 00 | |
| Cash on hand, per Treasurer's account | 1361 70 | |
| | $14,501 13 | |
| Funds in 1872 | 13,365 26 | |
| Gain, 1873 | $1135 87 | |
| The amount charged to Treadwell Farm to date is | 278 97 | |

E. E. EDWARD H. PAYSON, Treasurer.

SALEM, November, 1873.

The undersigned having examined the foregoing account of receipts and expenditures by the Treasurer and his statement of the funds of the Essex Agricultural Society, find the same correctly cast and well vouched.

GEO. D. PHIPPEN.
ALLEN W. DODGE.

SALEM, Dec. 6, 1873.

# OFFICERS OF THE SOCIETY.

## FOR 1873-74.

PRESIDENT.

WILLIAM SUTTON, of Peabody.

VICE PRESIDENTS.

GEORGE B. LORING, of Salem.
JOSHUA L. NEWHALL, of Newburyport.
JOHN KEELEY, of Haverhill.
BENJAMIN P. WARE, of Marblehead.

TREASURER.

EDWARD H. PAYSON, of Salem.

SECRETARY.

CHARLES P. PRESTON, of Danvers.

HONORARY TRUSTEES.

JOHN W. PROCTOR, of Peabody.
ALLEN W. DODGE, of Hamilton.
JOSEPH HOW, of Methuen.

TRUSTEES.

Charles C. Blunt, Andover ; James P. King, Peabody ;
Dudley Bradstreet, Topsfield ; W. Eustis Kimball, Bradford ;
Geo. W. Boynton, Georgetown; John Lee, Manchester ;
Thomas J. Clark, Salisbury ; E. K. Lee, Essex ;
James P. Cleveland, Boxford ; Wm. B. Morgan, Wenham ;
Francis Dodge, Danvers ; Josiah Newhall, Lynnfield ;
Francis Dane, Hamilton ; Thos. G. Ordway, W. Newbury;
Henry W. Foster, Beverly ; Wm. H. Patch, Rockport ;
Alonzo B. Fellows, Ipswich ; S. C. Pitman, Swampscott ;
J. D. W. French, No. Andover; E. P. Robinson, Saugus ;
James Flint, Middleton ; J. B. Swett, Haverhill ;
Bennett Griffin, Gloucester ; D. H. Stickney, Groveland ;
J. J. H. Gregory, Marblehead; John L. Shorey, Lynn ;
H. G. Herrick, Lawrence ; Robert A. Smith, Newburyport;
Joseph S. Howe, Methuen ; Aaron Sawyer, Amesbury ;
Richard Jaques, Newbury ; Daniel G. Todd, Rowley ;

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NEW MEMBERS—1873.

Joseph B. Abbott, Wenham ; J. Henry Hill, Amesbury ;
E. M. Boynton, W. Newbury ; Thomas Haskell, Gloucester ;
John H. Cheever, Manchester; Samuel James, Gloucester ;
James P. Cleveland, Boxford ; Joel Kimball, Danvers ;
J. M. Currier, Amesbury ; Isaac W. Kimball, Hamilton ;
Joshua S. Dodge, Beverly ; Allen Lee, Manchester ;
Benjamin N. Dodge, Beverly ; A. E. Lufkin, Essex ;
Benjamin B. Dodge, Beverly ; Mrs. Martha J. Low, Rockport ;
George W. Duncan, Haverhill; John G. Munsey, Beverly ;
Isaac C. Day, Boxford ; F. B. Messer, Peabody ;
Seth Friend, Beverly ; John J. Manning, Rockport;
Thomas Gould, Beverly ; Wm. N. Manning, Rockport ;
Hugh Hill, Beverly ; Richard P. Mills, Rockport ;
John B. Hodgkins, Rockport ; W. E. Merrill, W. Newbury ;
H. N. Harriman, Georgetown; Moses K. Noyes, Newbury ;
Clara A. Hale, Rowley ; G. N. Ordway, W. Newbury ;

Dudley H. Porter, Hamilton; Charles Tapley, Danvers;
Samuel B. Perry, Bradford; William Thornton, Bradford;
J. E. B. Perkins, Ipswich; John F. Todd, Rowley;
Simon J. Roney, Lynn; S. M. Titcomb, W. Newbury;
J. B. Richardson, Beverly; Henry A. White, Danvers;
Moses Ridgway, W. Newbury; Chas. E. Webster, Bradford;
Allen Smith, Rockport; Windsor M. Ward, Peabody,
Mrs. Farnham Stiles, Middleton;

☞ Any citizen in the County may become a member by paying the sum of three dollars to increase the permanent funds of the Society, and he will receive a certificate of his membership from the Secretary. No fines or assessments are ever imposed. Members are entitled to the free use of the Library, and a copy of the Transactions each year. All ordained Ministers of the Gospel residing in the County, and editors of newspapers, published therein, are entitled to the privileges of the Library.

# LIST OF PREMIUMS, &c.

FAT CATTLE.

| | |
|---|---|
| Thomas G. Ordway, West Newbury, for off ox, 1st premium, diploma and | $10 00 |
| Thomas G. Ordway, West Newbury, for near ox, 2d premium, | 8 00 |

BULLS.

| | |
|---|---|
| G. W. Herrick, Gloucester, pure bred Jersey, 1st premium, diploma and | 10 00 |
| Geo. W. Kittredge, No. Andover, pure bred Jersey, 2d premium, | 5 00 |
| Geo. W. Duncan, Haverhill, pure bred Short-Horn, 1st premium, diploma and | 10 00 |
| Geo. A. Abbott, Andover, Jersey, under two years old, 1st premium | 5 00 |

MILCH COWS.

| | |
|---|---|
| Sam'l E. Sawyer, Gloucester, Jersey, 1st premium, diploma and | 10 00 |
| Joseph Andrews, Essex, grade, 1st premium, diploma and | 15 00 |
| G. W. Herrick, Gloucester, grade, 2d premium, | 10 00 |
| Geo. M. Wonson, Gloucester, grade, 3d premium, | 5 00 |

HERD OF MILCH COWS.

| | |
|---|---|
| G. W. Herrick, Gloucester, herd, 1st premium, diploma and | 15 00 |
| Geo. M. Wonson, Gloucester, herd, 2d premium | 10 00 |

HEIFERS.

| | |
|---|---|
| G. W. Herrick, Gloucester, grade, under four years old and in milk, 1st premium, | 10 00 |
| Geo. M. Wonson, Gloucester, grade, 2d premium, | 5 00 |
| Aaron Knowlton, Essex, pure bred Ayrshire, over one year old, 1st premium, | 5 00 |
| J. Coolidge, Gloucester, Jersey, over one year old, 1st premium, | 5 00 |
| G. M. Wonson, Gloucester, " " " 2d premium, | 3 00 |
| D. Harrison Porter, Hamilton, grade, not in milk, 1st premium, | 5 00 |
| G. W. Herrick, Gloucester, " " " 2d premium, | 3 00 |
| Samuel E. Sawyer, Gloucester, pure bred calves, 1st premium, | 4 00 |
| David Bennison, Gloucester, grade calves, 1st premium, | 4 00 |
| George Collins, " " " 2d premium, | 2 00 |

WORKING OXEN.

| | |
|---|---|
| Thomas Haskell, Gloucester, 1st premium, diploma and | 12 00 |
| Gardner W. Herrick, Gloucester, 2d premium, | 10 00 |
| Thomas W. Haseltine, Bradford, 3d premium, | 8 00 |

BEST TEAMSTER OF OXEN.

| | |
|---|---|
| Joshua Roberts, Gloucester, premium offered by Geo. B. Loring, | 10 00 |

TOWN TEAMS.

| | |
|---|---|
| Geo. Collins, Gloucester, team of horses, premium, | 12 50 |
| Geo. Collins, Gloucester, for decorated car drawn by them, grat., | 12 50 |
| Town team of oxen, from Gloucester, 1st premium, | 12 50 |
| For car decorated, drawn by them, gratuity, | 12 50 |

STEERS.

| | |
|---|---|
| Geo. W. Kittredge, North Andover, yearlings, 1st premium, | 4 00 |
| Geo. W. Herrick, Gloucester, yearlings, 2d premium, | 3 00 |
| Geo. W. Kittredge, North Andover, two years old, 1st premium, | 5 00 |
| George James, Gloucester, two years old, 2d premium, | 4 00 |

STALLIONS.

| | |
|---|---|
| G. W. Rogers, Salem, in class of four years old or upward, 1st premium, diploma and | 15 00 |
| Wm. Cogswell, Bradford, in class of four years old or upward, 2d premium, | 10 00 |
| Francis Dane, Hamilton, in class of four years old or upward, 3d premium, | 8 00 |
| Thomas Sawyer, Boxford, three years old, 1st premium, | 8 00 |

BROOD MARES.

| | |
|---|---|
| Benjamin P. Ware, Marblehead, 1st premium, diploma and | 15 00 |
| Abijah P. Fuller, North Andover, 2d premium, | 10 00 |

FAMILY HORSES.

| | |
|---|---|
| C. C. Cressy, Gloucester, 1st premium, diploma and | 15 00 |
| Charles Davis, Rockport, 2d premium, | 10 00 |
| Samuel E. Sawyer, Gloucester, 3d premium, | 8 00 |

FARM AND DRAFT HORSES.

| | |
|---|---|
| Aaron Knowlton, Essex, 1st premium, diploma and | 12 00 |
| Samuel Dane, Hamilton, 2d premium, | 10 00 |
| S. F. Newman, Newbury, 3d premium, | 8 00 |
| Willard Smith, Essex, 4th premium, | 5 00 |
| Edward F. Knowlton, Essex, best teamster of horses, premium offered by Geo. B. Loring, | 10 00 |

PAIRS OF DRAFT HORSES.

| | |
|---|---|
| David Knowlton, Essex, 1st premium, | 15 00 |
| Edward H. Brown, Gloucester, 2d premium, | 10 00 |

COLTS—FIRST CLASS.

| | |
|---|---|
| C. C. Cressy, Gloucester, class four years old, 1st premium, diploma and | 10 00 |
| Thos. Sawyer, Boxford, class four years old, 2d premium, | 6 00 |
| " " " three years, 1st premium, | 8 00 |
| J. J. Manning, Rockport, three years, 2d premium, | 4 00 |

COLTS—SECOND CLASS.

| | |
|---|---|
| Herbert Sargent, Gloucester, for two years old, 1st premium, | 6 00 |
| Francis S. Lovett, Beverly, " " 2d premium, | 2 00 |
| Charles S. Kenison, Newbury, yearling, 1st premium, | 6 00 |
| Frederic Norwood, Gloucester, yearling, 2d premium, | 2 00 |

SHEEP.

| | |
|---|---|
| Francis Dane, Hamilton, Cotswold breeding ewes, 1st premium, | 8 00 |
| " " " ram, 1st premium, diploma and | 6 00 |
| " " " lambs, 1st premium, | 3 00 |

PLOUGHING—DOUBLE TEAMS.

| | |
|---|---|
| Joseph Horton, Ipswich, 1st premium, diploma and | 12 00 |
| Dennin & James, Gloucester, 2d premium, | 10 00 |
| G. W. Herrick, Gloucester, 3d premium, | 9 00 |

PLOUGHING—SINGLE TEAMS.

| | |
|---|---|
| Dennin & James, Gloucester, 1st premium, diploma and | 10 00 |

PLOUGHING—HORSES.

| | |
|---|---|
| Sylvester Dane, Hamilton, 1st premium, diploma and | 12 00 |
| Albert Titcomb, Rowley, 2d premium, | 10 00 |
| E. H. Brown, Gloucester, 3d premium, | 8 00 |
| C. C. Cressy, 4th premium, | 6 00 |
| Oscar Littlefield, Rowley, best teamster in horse ploughing, | 10 00 |

PLOUGHING—SWIVEL PLOUGH.

| | |
|---|---|
| William Foster, North Andover, 1st premium, diploma and | 12 00 |

PLOUGHING BY BOYS.

| | |
|---|---|
| Willie Merrill, West Newbury, special premium, | 25 00 |

AGRICULTURAL IMPLEMENTS.

| | | |
|---|---|---|
| Bennett Griffin, Gloucester, | horse rake, | 3 00 |
| " " " | Bullard tedder, diploma and | 5 00 |
| " " " | ploughs, | 3 00 |
| " " " | Randall harrow, diploma and | 5 00 |
| " " " | double harpoon hay fork, | 1 00 |
| John Atkinson, Gloucester, | wheels, | 3 00 |
| F. Burnham, Ipswich, | covered seat for hay wagon, diploma and | 3 00 |
| " " | Burnham's sled shoes, | 5 00 |
| Whittemore Bros., Boston, | Doe plough, | 3 00 |
| " " " | vegetable cutter, | 2 00 |
| " " " | wheel jack, | 1 00 |
| Reed & Bowen, Boston, | sawing machine, diploma. | |
| Greenwood & Bassett, Haverhill, | washing machine, | 2 00 |

CARRIAGES.

| | |
|---|---|
| James B. Richardson, phæton, etc., premium, diploma and | 15 00 |
| J. M. Currier, Amesbury, business wagon, premium, | 10 00 |

DAIRY.

| | |
|---|---|
| Mrs. F. Stiles, Middleton, butter, 1st premium, diploma and | 10 00 |
| Mrs. Sarah L. Ridgway, West Newbury, 2d premium, | 8 00 |
| Mrs. Mehitable Foster, Hamilton, 3d premium, | 6 00 |
| Mrs. Sarah P. Burnham, Essex, gratuity, | 3 00 |

SWINE.

| | |
|---|---|
| W. A. Dane, Hamilton, 1st premium, diploma and | 8 00 |

GRAIN CROPS.

| | |
|---|---|
| A. P. Noyes, Middleton, rye, 1st premium, diploma and | 10 00 |
| Lafayette Day, Bradford, corn, 1st premium, diploma and | 10 00 |

ROOT CROPS.

| | |
|---|---|
| Albert Titcomb, Rowley, onion crop, 1st premium, diploma and | 10 00 |
| Alb'rt E. Lufkin, Essex, cabbage crop, 1st premium, diploma and | 10 00 |

CRANBERRIES.

| | |
|---|---|
| Hiram A. Stiles, Middleton. cultivation of cranberries, 1st premium, diploma and | 15 00 |

DESTRUCTION OF CANKER WORMS.

| | |
|---|---|
| Daniel Foster, 2d, Beverly, experiment, 1st premium, | 25 00 |

ESSAYS.

| | |
|---|---|
| F. H. Appleton, Peabody, 1st premium, diploma and | 15 00 |
| Charles J. Peabody, Topsfield, 2d premium, | 10 00 |

REPORTS OF COMMITTEES.

| | |
|---|---|
| J. D. W. French, North Andover, 1st premium, diploma and | 10 00 |
| Gilbert Conant, Ipswich, 2d premium, | 8 00 |
| T. C. Thurlow, West Newbury, 3d premium, | 6 00 |

FARM ACCOUNTS.

| | |
|---|---|
| F. H. Appleton, Peabody, 1st premium, | 10 00 |

| | |
|---|---|
| Awarded by Committee on Poultry, | 76 00 |
| " " " " Vegetables and Seeds, | 76 00 |
| " " " " Fruits, | 221 50 |
| " " " " Flowers, | 35 00 |
| " " " " Counterpanes, Rugs, etc., | 28 50 |
| " " " " Fancy Articles, | 34 50 |
| " " " " General Merchandise, | 23 00 |
| " " " " Bread and Honey, | 20 00 |
| " " " " Articles manufactured from leather, | 10 00 |
| | $1378 50 |

# RECAPITULATION.

FARMS.

| | | | |
|---|---|---|---|
| Amount awarded to Ploughing, | | $124 00 | |
| " " | Farm Implements and Carriages, | 61 00 | |
| | | | $185 00 |

FARM STOCK.

| | | | |
|---|---|---|---|
| Amount awarded to Fat Cattle, | | 18 00 | |
| " " | Bulls, | 30 00 | |
| " " | Milch Cows, | 65 00 | |
| " " | Heifers, | 46 00 | |
| " " | Working Oxen Working Steers and Teamsters, | 40 00 | |
| " " | Steers, | 16 00 | |
| " " | Town Teams, | 50 00 | |
| " " | Stallions, | 41 00 | |
| " " | Brood Mares, | 25 00 | |
| " " | Family Horses, | 33 00 | |
| " " | Farm and Draft Horses, | 45 00 | |
| | *Amounts carried forward* | 409 00 | 185 00 |

| | | | | |
|---|---|---|---|---|
| | | *Amounts brought forward* | 409 00 | 185 00 |
| Amount awarded to | | Pairs of Draft Horses, | 25 00 | |
| " | " | Colts, | 44 00 | |
| " | " | Sheep, | 17 00 | |
| " | " | Swine, | 8 00 | |
| " | " | Poultry, | 76 00 | |
| | | | | 579 00 |

FARM PRODUCE, ETC.

| | | | | |
|---|---|---|---|---|
| Amount awarded to | | Vegetables and Seeds, | 76 00 | |
| " | " | Fruits, | 221 50 | |
| " | " | Flowers, | 35 00 | |
| " | " | Dairy, | 27 00 | |
| " | " | Bread, etc., | 20 00 | |
| " | " | Root Crops, | 20 00 | |
| " | " | Grain Crops, | 20 00 | |
| " | " | Cranberries, | 15 00 | |
| " | " | Destruction of Canker Worms, | 25 00 | |
| " | " | Essays, Farm Accounts and Reports of Committees, | 59 00 | |
| " | " | all other objects, | 96 00 | |
| | | | | 614 50 |
| | | | | $1378 50 |

## TRUSTEES' MEETING.

A meeting of the Trustees of the Society was held at Plummer Hall, Salem, Nov. 14th.

Present—Messrs. Wm. Sutton, G. B. Loring, J. Keeley, B. P. Ware, C. C. Blunt, D. Bradstreet, A. W. Dodge, F. Dodge, J. How, H. G. Herrick, A. B. Fellows, J. D. W. French, J. S. Howe, D. G. Todd, J. P. Cleveland, John Lee, J. P. King, B. Griffin, E. K. Lee, R. Jaques, W. B. Morgan, J. B. Swett, J. Newhall, W. E. Kimball, W. H. Patch, D. H. Stickney, J. L. Shorey, T. G. Ordway, A. Sawyer, R. A. Smith, S. C. Pitman, J. Flint and C. P. Preston.

The President, William Sutton, presided, and the following business was transacted.

The Committee appointed to audit the bills of the last show, reported:

| | |
|---|---|
| Receipts, - - - - | $1271 03 |
| Expenses, - - - - | 1261 79 |
| Balance, - - - - | $9 34 |

There are unpaid bills amounting to about $75.

The reports of the several committees on Grain and Root Crops, Cranberries, the Treadwell Farm, and Destruction of Canker Worms, were read and accepted.

Mr. E. H. Payson, Treasurer, read his report, which was accepted, and he was unanimously re-elected for the year ensuing.

Voted—That the report of the Committee on Essays, etc., be accepted when presented by them.

Voted—To continue the Fifty dollar scholarship in the Massachusetts Agricultural College to Geo. R. Dodge.

Voted—To hold the Cattle Show and Fair, next September, in Danvers.

The following Committee was chosen to have charge of the fixtures and furniture belonging to the Society:—Charles P. Preston, B. P. Ware and H. G. Herrick.

Voted—That a committee of seven be appointed to report a list of committees for the next Fair, at the Trustees' meeting in June next, as follows:—Geo. B. Loring, Allen W. Dodge, H. G. Herrick, D. H. Stickney, R. A. Smith, Bennett Griffin and James P. King.

Voted—To add twenty per cent. to the premiums on Stock and Poultry, and fifty per cent. to the premiums on Fruits, Flowers and Vegetables.

Voted—That diplomas be awarded only for animals or articles of *especial* merit.

Messrs. E. K. Lee, B. Griffin and A. Low were chosen to revise the premiums on Poultry, and Messrs. J. J. H. Gregory and B. P. Ware those on Fruits and Vegetables.

Voted—That each exhibitor of Poultry shall be required by the Committee to make a statement, in writing, of the merits of the breed or breeds which he exhibits.

Chas P. Preston, Sec'y.

# CONSTITUTION

OF THE

# ESSEX AGRICULTURAL SOCIETY.

ARTICLE I. There shall be a President, four Vice Presidents, a Secretary and a Treasurer, who shall be Trustees, *ex-officio ;* in addition to these, thirty (originally twelve) other Trustees shall be chosen from the members at large, all of whom shall continue in office until others are elected in their stead.

ART. II. There shall be an Annual Meeting of the Society, at such time as the Trustees shall determine ; at which all officers shall be elected. Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. III. If at any meeting of the Society, or the Trustees, the President and Vice Presidents shall be absent, the members present may appoint one from among them to preside at such meeting.

ART. IV. The President, or, in case of his absence, either of the Vice Presidents, with the advice of the Trustees, may call a special meeting of the Society ; or whenever a written application, with the reasons assigned therefor, shall be made by any twelve members of the Society, to the President and Trustees, they shall call such meeting.

ART. V. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon ; seven of whom with the presiding officer shall make a quorum.

ART. VI. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings ; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper, (provided the premiums offered do not exceed the funds of the Society :) and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

ART. VII. The Secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

ART. VIII. The Treasurer shall receive all moneys due or payable to the Society, and all donations that may be made to it; for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such moneys as he shall have orders for from the Trustees; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in such sum as the Trustees shall direct, and with such sureties.

ART. IX. A committee shall be appointed annually by the Trustees to audit the Treasurer's accounts, who shall report to the Society; and the same being accepted shall be entered by the Secretary in his books.

ART. X. In case of the death, resignation, incapacity, or removal out of the county of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. XI. Any citizen of the county may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. XII. A Committee shall be raised from time to time to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our country; the same to be sacredly appropriated to that purpose.

ART. XIII. All ordained ministers of the Gospel who reside within the county, shall be admitted honorary members of the Society.

ART. XIV. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

# AMENDMENTS TO THE CONSTITUTION.

## ADOPTED SEPT. 29th, 1863.

ARTICLE I. The officers of the Society shall consist of a President, four Vice Presidents, a Treasurer, Secretary, and thirty Trustees.

ART. II. A Committee of one from each city and town in the county, represented in the Society, shall be appointed at each annual meeting, by nomination from the floor, to report a list of officers, (with the exception of Treasurer,) at the next succeeding annual meeting, which report shall be acted on, and the officers elected at said meeting by the ballots of the members present.

ART. III. The Treasurer shall be elected annually by the Trustees, at their meeting in November.

ART. IV. The Committee on nomination shall hold its meeting prior to the first day of July each year ; and its report shall be immediately placed in the hands of the Secretary, for the examination of any member of the Society ; and the Secretary shall cause ballots to be prepared in conformity with said report, for the use of the members, and presented at the annual meeting.

ART. V. The first election under these amendments to be had at the annual meeting in 1864, and they shall only apply to the Trustees so fast as they go out of office under the present tenure of election.

## AMENDMENT ADOPTED SEPT. 24th, 1867.

Trustees of the Society shall not be eligible to act upon the nominating committee ; and members of the nominating committee shall not be eligible as candidates for Trustees.

## AMENDMENT ADOPTED SEPT. 29th, 1868.

Each member of the Committee for the nomination of officers shall be empowered to appoint a substitute in case he declines serving.

## AMENDMENT ADOPTED SEPT. 23d, 1873.

Article 1st amended so as to provide that one Trustee from each town in the county, in which there are members of the Society, shall be chosen from the members at large.

# LIST OF MEMBERS

OF THE

# Essex Agricultural Society.

NOTE.—Those marked with * deceased since 1869; with † removed from the county. For names of members deceased previous to 1869, refer to list published that year.

## AMESBURY.

Bailey, O. S.
*Bailey, Thomas
Binney, William C.
Cole, Augustus K.
Currier, J. M.
Evans, John
Goodwin, A. E.
Gunnison, William
Haskell, William H.
Hill, J. Henry
Huntington, B. F.
Jones, Philip
Loud, C. H.
†Moore, Appleton
Morse, Daniel L.
*Morse, John S.
Nichols, Charles H.
Nichols, Stephen, Jr.
Patten, T. B.
Quimby, Thomas W.
Sargent, J. B.
Sargent, Orlando
Sargent, Patten
Sargent, Willis
Sawyer, Aaron
Sawyer, Thomas C.
Tukesbury, D. M.

## ANDOVER.

Abbott, Asa A.
Abbott, George A.
Abbott, Hartwell B.
Abbott, John B.
*Abbott, Jonathan
Abbott, Moody B.
Abbott, Stephen D.
Abbott, Sylvester
Andrews, Moses C.
*Ballard, Joshua
Bardwell, Simeon
Blunt, Charles C.
Blunt, Milton J.
†Bodwell, Henry A.
†Bond, William
Callahan, Robert
Carruth, Isaac
†Chamberlain, N., Jr.
Chandler, Joseph
Cheever, James
Chickering, William
†Chipman, Degrass
*Clark, Hobart
Cummings, C. O.
Curwin, Samuel H.
†Farnham, John C.
†Flagg, Wilson
*Flint, John
Foster, George
Foster, George W.
Foster, Moses, Jr.
Foster, Thomas C.
†French, Charles
†French, George H.
*Gray, David
Harnden, Henry C.
Hazen, Nathan W.
Hidden, David I. C.
Holt, Dean
Holt, E. F.
†Holt, Herman
Holt, H. P.
Holt, Joseph S.
Jenkins, John B.
Jenkins, Kendall
Kimball, Walter H.
Mason, George F.
*Merrill, William

Morton, Marcus, Jr.
*Needham, Samuel
*Pettingill, Merrill
Phelps, Hermon
†Pierce, William
Pillsbury, Paul P.
Raymond, Samuel
Rea, Jasper
Rogers, Fitzwilliam
Smith Peter
Upton, Edward C.
*Whittier, Nathaniel

## BEVERLY.

Appleton, Isaac
Avery, Mark B.
Baker, John I.
Baker, Stephens
Bell, John
Chase, Samuel
Cole, Zachariah
Conelly, Stephen
Cressy, Joseph
Dodge, Aaron
Dodge, Andrew
Dodge, Benjamin N.
Dodge, Benjamin S.
Dodge, Joshua S.
Dodge, Richard
*Dodge, William E.
Edwards, Ephraim A.
Edwards, Israel O.
Foster, Henry W.
*Friend, Seth
Friend, Seth
Giles, Benjamin V.
Gould, Thomas
Hathaway, John
Haven, Franklin
Herrick, Joseph H.
Hill, Hugh
Larcom, David
*Lord, Abraham
Lord, Cyrus W.
Lovett, Francis S.
Lummus, E. E.
*Marshall, Timothy
Mason, Alfred A.
Mason, Alphonso
Mason, George
Mason, Lyman
McDonald, Daniel
Meacom, John
Mitchell, Charles
Munsey, John G.
Paine, Charles C.
Pitman, Mark
Porter, Adoniram
*Porter, John
†Porter, Robert
Rankin, George C.
Richardson, J. B.
†Safford, Nathaniel T.
*Sheldon, Jesse
Standley, Sam'l D. G.
Stephens, Augustus
†Stone, Edwin M.
Walker, Lawson
Waters, Richard P.
†Waters, William C.
Wilson, Joseph

## BOXFORD.

Andrew, Isaac W.
Barnes, B. S.
Chadwick, George W.
Cleveland, James P.
*Cleveland, Wm. N.
Cole, David M.
Cole, John K.
Curtis, Francis
Day, Isaac C.
Day, John
*Day, Joshua T.
†Gould, Jacob
Hale, Isaac
Hale, John
Harriman, Daniel F.
Herrick, Israel
Killam, Oliver P.
Kimball, Samuel
†Palmer, Charles Lane
Palmer, F. H.
Peabody, Stephen
Perley, Charles
Sawyer, Thomas
Wood, Enoch
Wood, John T.

## BRADFORD.

Carlton, James T.
Carlton, Nathaniel
Chadwick, Henry M.
Cogswell, George
Cogswell, William
Day, Albert J.
Day, Hiram
Day, Lafayette
Day, Royal
Elliott, William
Ellis, John A.
Emerson, Charles B.
Gage, Edmund
Haseltine, Thomas
Haseltine, William
Hopkinson, Sam'l W.
Johnson, A. P.
*Johnson, Charles G.

Johnson, Laburton
Kimball, Albert
Kimball, A. Laburton
*Kimball, David
Kimball, Henry G.
Kimball, Leverett
*Kimball, Seth
*Kimball, Sylvester
Kimball, William B.
Kimball, Wm. Eustace
Little, M. P. Mrs.
*Locke Oliver
Merrill, John F.
Morse, C. E.
Ordway, Alfred
Ordway, Enoch F.
Ordway, Warren
Peabody, Frank
Peabody, Daniel
Perley, John
Perry, Samuel B.
Sawyer, Samuel C.
Tewksbury, John B.
Thornton, William

## DANVERS.

†Adams, Marshall C.
Bartlett, James A.
Berry, Allen A.
Berry, Eben G.
Black, William
Boardman, I. P.
Brown, Amos
Brown, Charles W.
Butler, J. C.
Cummings, Samuel P.
†Devereux, George F.
Demsey, L. P.
Dodge, Elnathan
Dodge, Francis
*Dodge, William, Jr.
Fellows, Alfred
Fowler, Augustus
Fowler, Samuel P.
French, George W.
Gould, Charles H.
Grosvenor, David A.
†Holden, Seth
Hyde, Elisha G.
Kimball, Joel, Jr.
†Knight, S. Leverett
Lander, William A.
Lane, Benjamin T.
Langley, J. R.
Learoyd, A. P.
Legro, Edmund
Martin, George B.
Massey, S. D.
*Merrill, Ernest S.
Merrill, Levi
Merrill, Samuel A.
Mudge, Edwin
Nichols, Andrew
Page, Nathan, Jr.
Peart, William B.
Perley, A. P.
Perley, Frederick
Perry, James M.
Pettingill, David A.
Pope, Ira P.
Porter, Benjamin F.
Pratt, Amos
Preston, Charles P.
Preston, John
*Preston, John S.
Preston, Samuel
Prince, Amos
Putnam, Charles O.
Putnam, Eben
Putnam, Edwin F.
Putnam, Francis P.
Putnam, Israel H.
Putnam, J. A.
Putnam, Joel
Putnam, Orrin
Putnam, Otis F.
Putnam, Rufus
Putnam, William R.
Richards, Daniel
Ropes, Joseph W.
Sears, John A.
Silvester, Joshua
Spaulding, Samuel W.
Swan, Sylvanus B.
Swinerton, John
Tapley, Charles
Tapley, George
Tapley, Gilbert
Tapley, Gilbert A.
*Tapley, Nathan
Waite, Peter
Walcott, William H.
Wallis, Samuel
Warren, Aaron W.
Warren, Jonas
Weston, William L.
White, Amos A.
White, Henry A.
*Wilkins, Joel

## ESSEX.

Andrews, Elias
Andrews, Elihu
Andrews, Joseph
Andrews, Miles S.
Burnham, D. Brainerd
Burnham, Washington
Burnham, Wm. Howe
*Choate, David
Cogswell, Chas. B.
Dodge, Grover
Haskell, David L.
Haskell, George

Knowlton, Aaron
Knowlton, David
Knowlton, Moses
Lee, Edward K.
Low, Aaron
Low, Josiah
Lufkin, A. E.
Mears, Wm H.
Perkins, John
Story, Andrew
Story, Ephraim

## GEORGETOWN.

*Adams, George E.
Bateman, A. P.
Boynton, George W.
†Brocklebank, Samuel
Butler, Oliver S.
Chapman, Jonathan
Dole, Moody S.
Dole, Richmond
Harriman, Hiram N.
Hoyt, John A.
Jewett, Jacob F.
*Jewett, Robert
Lambert, Nathaniel
Little, Samuel
Lovering, John H.
Moulton, Daniel E.
Nelson, Charles
Nelson, Sherman
Nelson, Solomon
Nelson, William
Osgood, Stephen
Pettingell, Henry
Pillsbury, J.
Poor, Samuel T.
Preston, John
Sanborn, George W.
Spofford, Sumner P.
Tenney, George J.
Tenney, Gorham D.
Tenney, Milton G.
Tenney, Moses
Tenney, Orlando B.
Tenney, Richard
Wheeler, William S.
Wildes, Green
Wilson, Isaac

## GLOUCESTER.

Atkinson, John
Babson, Daniel T.
Babson, Fitz J.
†Babson, Gustavus, Jr.
Babson, Horatio
Babson, John J.
Barrett, Charles P.
Boynton, Charles
Bradford, George R.
Bray, Aaron W.
Brown, Edward H.
Burnham, A. M.
Burnham, H. A.
Burnham, S. A.
Butler, Benjamin F.
Calef, John C.
Campbell, C. H.
Carter, John S.
Carter, Sherman J.
Clark, John
Cole, Israel H.
Conant, Thomas
Cook, Benjamin F.
Corliss, Benjamin H.
Corliss, John
Cressy, Curtis C.
Cronin, John
Dale, Eben, Jr.
Davis, James
Davis, William P.
Day, Abraham
Dennin, George
Dennison, C. W.
Dodd, Stephen
Dolliver, John H.
Dolliver, William C.
Dolliver, William P.
Dyer, J. Franklin
Emanuel, Henry
Fears, Robert
Fears, Robert R.
Foster, Jeremiah
Friend, Elbridge G.
Garland, Joseph
Gilbert, Addison
Griffin, Bennett
Grover, Charles E.
Hadley, William
Harvey, Alonzo F.
Haskell, H. C. L.
Haskell, Thomas
Haskell, William H.
Herrick, Gardner W.
Hough, Benjamin K.
Hoyt, Edward C.
James, George
James, Samuel
Jones, William
Knowles, Thomas J.
Lane, Andrew
Lane, George
Lancaster, T. S.
Lawrence, R. C.
Lindberg, A. F.
Loring, Francis M.
Low, David W.
Low, Gorham P.
Lowe, Sidney
Marr, Chester, Jr.
Mayo, Israel C.
Mayo, Josiah, Jr.
McFarland, L.

Merchant, E. W.
Norwood, George
Parsons, William, 2d.
Parsons, W. Frank
Patch, Isaac
Pattillo, Alexander
Pearce, Edward H.
Perrin, Henry S.
*Perrin, William H.
Pew, William A.
Phillips, N. H.
Plummer, David
Presson, David S.
Price, Augustus E.
Proctor, Joseph O.
Proctor, Wilbur F.
Ricker, Richard W.
Rogers, Allan
Rogers, John S.
Rogers, John S. E.
Rust, William P.
Sanford, H. G.
Sawyer, Samuel E.
Shepard, Joseph C.
Smith, Benjamin H.
Somes, John E.
Stacey, Eli F.
Stacey, John H.
Stanwood, Barnard
Staten, Edward
*Stevens, Zachariah
Story, Cyrus
Thompson, Chas. P.
Tibbetts, Robert A.
Todd, John
Webster, Nathaniel
Wetherell, M. L.
Wilson, John J.
Witham, Addison
Wonson, Augustus H.
Wonson, F. G.
Wonson, George M.
Wonson, J. W.
York, Nathaniel S.

## GROVELAND.

Atwood, Daniel
Atwood, Moses P.
Balch, Eustis
Balch, Thomas H.
Burbank, John
Clark, Elijah
Curtis, Edwin T.
Fegan, Henry C.
Hardy, Ira
Harrington, Edward
Hopkinson, Walter H.
Kimball, Charles
Ladd, John I.
Ladd, Nathaniel E.
Ordway, Leverett S.
Ordway, Moody
Parker, Benjamin
Parker, Eldred S.
Pemberton, Luther K.
Savary, Charles G.
Savary, Charles P.
Spofford, Jeremiah
Spofford, Morris
Stickney, Abel
Stickney, Daniel H.
Stiles, Charles F.
Wales, Herbert E.
Walker, George S.
Wardwell, Z. C.
Woodman, Ira S.

## HAMILTON.

Allen, Francis R.
*Brown, Jacob
Brown, William A.
†Burnham, Choate
Dane, Ephraim A.
Dane, Francis
Dane, George
Dane, George E. F.
Dane, Samuel
Dane, William A.
Dodge, Allen W.
Dodge, Emerson P.
Dodge, George B.
Gregory, Samuel B.
Kimball, Isaac W.
Knowlton, Isaac
Knowlton, Isaac F.
Knowlton, Joseph
Lamson, Jarvis
*Morgan, Luther S.
†Norris, George
Patch, Asahel H.
Patch, Oliver Mrs.
Porter, Dudley H.
Porter, Oliver
Rankin, Eli C.
Safford, Daniel E.
Smith, Alvin
Smith, John
Whittredge, John

## HAVERHILL.

Barry, J. M.
*Bartlett, James A.
Bodwell, Stephen
Brickett, Barnard
Brickett, Daniel
Brickett, Daniel H.
Brickett, Franklin
Butters, Charles
Caldwell, William

Carlton, John
Carlton, Samuel
Carlton, William B.
Chase, Abel W.
Chase, C. W.
Cheever, H. W.
Clark, William P.
†Coburn, A. M.
Coffin, George
Cook, Justin T.
Corliss, Charles
Cummings, Henry
Currier, Samuel M.
Cushman, R. P.
Davis, George W.
Davis, Phineas E.
Dewhurst, James
Dunbar, Charles H.
Eaton, Harrison
Elliott, Samuel
Elliott, Samuel H.
Emerson, Albert
Emery, Benjamin E.
Emery, Moses G. J.
Farnsworth, J. H.
Farrar, Joseph E.
Fellows, Samuel
Fitts, D. F.
Flanders, Daniel D.
†Fletcher, Edmund
Frothingham, Edw. G.
*Gale, James E.
Gardner, John
George, M. D.
Gile, James F.
Gilman, John P.
Goodrich, T. J.
Grieves, J.
Hale, Samuel
*Harding, Thomas
*Harmon, David P.
Haseltine, Amos, Jr.
*Hazeltine, Hazen
Holt, Charles
Hooke, Daniel
How, Moses
†Howe, Nathaniel S.
*Hoyt, George H.
*Hoyt, Humphrey
Ingalls, E. T.
Jeffers, William
Keely, John
Kittredge, Alfred
Lackey, Andrew
†Lee, George W.
†Little, Edmund B.
†Little, J. G. S.
Longfellow, Samuel
Marsh, John J.
Merrill, William
Mitchell, E.
Mitchell, Seth K.
Morse, John
Morse, S. E.
Nichols, James R.
†Nichols, John A.
Nichols, John B.
*Noyes, James
Noyes, Johnson
Oberton, W. W. S.
Ordway, Joshua H.
Patch, Paul D.
*Plummer, Hiram
Porter, Dudley
*Porter, Ebenezer
Putnam, Moses W.
Randall, John P.
Richards, William B.
Richardson, John B.
Ridgway, Joseph N.
Roberts, Stephen
Robinson, Edwin
Savary, Robert
Shattuck, L. P., Jr.
Sleeper, Sherburne C.
*Slocum, Rufus
Smiley, James V.
Smith, Jesse
Spiller, J. B.
Stewart, John
Swett, Jackson B.
Taylor, Levi
Taylor, Martin
Taylor, Oliver
Titcomb, Benaiah
*Tompkins, Christ'r
Towle, Samuel K.
†Turner, James
Wadleigh, Levi C.
Webster, David
Webster, Ebenezer
Webster, E. F.
*Webster, Nathan
Webster, Richard
†Welch, Ezra B.
West, H. K.
West, James F.
West, Thomas
Wheeler, Allison
White, James D.
Whittier, Alvah
*Whittier, Leonard
Whittier, Warner R.
Winchell, James H.
*Wingate, Moses

## IPSWICH.

*Andrews, David
Andrews, Theodore
Appleton, B. D.
Appleton, Daniel F.
Baker, S. N., Jr.
Bond, James W.
Bray, Frederick
Brown, Aaron F.
Brown, John

Brown, Manasseh
Brown, William G.
Caldwell, Abraham
Clark, Erastus
Cogswell, Ebenezer
*Cogswell, William
Conant, Gilbert
*Dodge, Richard T.
Fall, Tristam B.
†Farley, Alfred M.
*Farley, Joseph
†Farley, Robert, Jr.
Fellows, Alonzo B.
Gould, John J.
Grant, John
Grant, Joshua B.
Green, George H.
Haskell, George
Hobbs, John
Hodgdon, George
Hodgkins, Augustine
Horton, Joseph
Hunt, Samuel
Hurd, Y. G.
Jewett, Israel K.
Jordan, Robert Mrs.
Kimball, Charles
Kimball, Daniel
Kinsman, Joseph F.
Kinsman, William H.
†Locke, Calvin
Low, Thomas
Marshall, Joseph
†Merrill, Ezekiel O.
Mitchell, Frederick
Perkins, J. E. B.
Perley, David T.
Potter, Asa T.
Rogers, Isaiah A.
Ross, Joseph
Shatswell, Nathaniel
Smith, Webster
Stone, Augustine
Story, Alden
Tappan, Amos
Wade, Asa
†Wade, William F.
Waite, Abraham D.
Whittier, Maynard
*Worcester, Ira

## LAWRENCE.

Ambrose, Nathaniel
Bodwell, Asa M.
†Bryant, Oliver
Cabot, George D.
Currier, Eben B.
Currier, J. Morrill
*Decker, J. M.
Durant, Adolphus
Durant, W. A.
Emery, Levi
French, A. J.
Gile, W. F.
Harmon, Nathan W.
Herrick, Fred. St. Clair
Herrick, H. G.
Herrick, James D.
Hills, George W.
Hood, Gilbert E.
Howard, J. B.
Hubbard, Leavitt
†Kimball, Josiah
†Kimball, William M.
Lamb, William D.
Mallard, L. Mrs.
Merrill, George S.
Page, E. F.
Page, Edward
Rollins, John R.
Russell, W. A.
Saunders, Daniel, Jr.
Stevens, William
Warren, Albert
*Webster, Charles
Wilder, G. W.
Wright, W. H. P.

## LYNN.

*Allen, Jacob A.
Baker, Ezra
Batchelder, John
Black, James D.
Breed, Andrews
Breed, Henry A.
*Breed, Nehemiah, Jr.
Brown, Ira P.
Chase, Nathan D.
Chamberlain, Wm. D.
†Coggeshall, J. H.
*Collins, Ezra
Davis, Edward S.
Emery, George E.
Fay, William P.
Graves, Samuel
Harris, N. S.
Hawkes, Nathan M.
Healy, Mark
Hovey, Rufus P.
Keene, George W.
Kimball, Rufus
Merritt, Charles
Newhall, Hiram L.
Norris, George, Jr.
*Nye, James M.
*Osborn, William
†Osborn, William H.
Potter, Edward P.
Putnam, F. W.
Rankin, John D.
Rhoades, Jacob
Roney, Simon J.

*Saunderson, Jos. N.
Shorey, John L.
Spinney, William N.
Usher, Roland, G.
†Wyman, Isaac

LYNNFIELD.

Brown, Joseph
Danforth, John
Emerson, D. P.
Emerson, Hubbard
Hawkes, George L.
Herrick, George E.
Newhall, Josiah
Perkins, John
†Perkins, John H.
†Richardson, Charles
Smith, Henry E.
†Smith, Joseph
Symonds, George W.

MANCHESTER.

Allen, Luther
Burnham, Frederick
†Chase, Joseph S.
Cheever, John H.
Cheever, William M.
Fitz, William F.
Friend, Daniel W.
Gentlee, Thomas P.
Hildreth, John D.
Jewett, Alfred W.
Knight, Henry
Knight, John, Jr.
Lee, Allen
Lee, John
Moon, Ambrose
Price, John
Smith, A. W.
Tappan, Benjamin
Tappan, Ebenezer
Tappan, Israel F.
Tappan, Lewis N.

MARBLEHEAD.

Alley, Franklin
Appleton, Thomas
Child, Caleb
Cloutman, Henry
Gregory, J. J. H.
Hathaway, Joseph B.
Hathaway, Seth W.
†Millett, Joseph
Nutting, John
Paine, Thomas T.
Robinson, Frederick
*Stone, John
Ware, Benjamin P.
Ware, Horace
Warren, David
Winslow, George W.
†Wyman, Israel
†Wyman, Luke

METHUEN.

*Barker, J. B.
*Barker, Stephen
Bradley, Leverett
Butters, George W.
Currier, Daniel
Davis, John
Emerson, Jacob, Jr.
Frederic, John W.
Gage, George W.
Goss, Charles E.
Hicok, S. S.
How, Christopher
How, Joseph
How, Joseph S.
Ingalls, Charles
Ingalls, Joseph F.
*Low, John
Morrison, D. T.
Morse, Jonathan
Nevins, David
Patterson, D. H.
Phippen, G. S.
Rollins, Amos C.
*Russ, John
Sargent, S. G.
Sleeper, William C.
Tozier, C. L.
†Welch, John

MIDDLETON.

Berry, Jonathan
Berry, William
Currier, George A.
Flint, James
Hutchinson, J. A.
Noyes, A. P.
Phelps, William A.
Stiles, David
Stiles, Farnham
Stiles, Farnham Mrs.
Stiles, Hiram A.
Wellman, John K.

## NEWBURY.

Adams, Charles
Adams, Charles W.
*Adams, John C.
Adams, John J.
Bray, Richard S.
Caldwell, David S.
Colman, Moses
Goodrich, William F.
Hill, Mark F.
Howard, Horatio M.
Ilsley, Paul M.
Jaques, Richard
Jaques, Richard T.
Jaques, William
Kent, John N.
Kent, Joshua N.
Langley, William C.
Little, E. C.
Little, E. F.
Little, Edward H.
Little, Joseph
Little, Nathaniel
Little, Silas
Little, Stephen W.
*Little, Tristram
Little William
Longfellow, H. F.
Longfellow, J.
Longfellow, J. Mrs.
Lucy, Gideon R.
Lunt, Charles M.
Lunt, J. Austin
*Lunt, Joseph
Moody, N. W.
Newman, Sidney F.
Noyes, James
Noyes, Luther
Noyes, Moses K.
Perkins, Charles L.
Perkins, W. W.
Plummer, Daniel, Jr.
Plummer, G. H.
Plnmmer, Greenleaf
Plummer, William C.
Poole, B. P. Mrs.
Randall, G. A.
Rogers, Abial
Rolfe, Joseph N.
Tenney, H. L.
Thurlow, William
Woods, C. W.
Young, Hiram

## NEWBURYPORT.

Adams, J. Quincy
Adams, Rufus
*Akerman, John
Akerman, Joseph
Ashby, William
Balch, John H.
Ballou, C. N.
Bartlett, T. K.
Batchelder, Daniel C.
Battell, Ebridge
Boardman, Isaac H.
Brewster, William H.
Bricher, William
Brown, David F.
Canney, Hiram
Capers, Thomas
Coffin, Frederick J.
Colby, George J. L.
Colby, George W.
Colman, Daniel T.
Colman, James C.
Colman, William T.
Currier, Warren
Cushing, Caleb
Cutter, Eben P.
*Davis, Benjamin
Delano, Otis
†Dodge, John S.
Dyer, J. R.
†Fernald, Henry B.
*French, Curtis
Gale, Stephen M.
George, George
Griffin, Eliphalet
*Hale, Isaac, Jr.
Hale, Joshua
Hale, Josiah L.
Hamlet, Daniel
Hart, James S.
*Horton, Daniel
†Hudson, Charles H.
Huff, William
Huse, William H.
Ireland, Charles H.
Jackman, George W.
Johnson, William P.
Kelley, E. G.
Little, John G.
Little, Moses S.
Lunt, Charles
Lunt, Micajah
*Marston, Stephen W.
Merrill, Enoch
Merrill, Samuel, Jr.
Morrison, Daniel
Morse, James M.
Morss, Joseph B.
Mosely, Edward A.
Mosely, Edward S.
Moulton, Henry W.
Moulton, Joseph
Newhall, Asa T.
Newhall, Joshua L.
Northend, E. T.
Noyes, William, Jr.
Ordway, Parsons
Page, John T.
Pearson, J. P.
Perley, R. M.

Pettingell, Moses
†Phillips, Samuel
Plummer Moses A.
*Remick, John E.
*Robinson, J. D.
Shoof, Henry
Smith, David
Smith, Edmund
Smith, Robert A.
Stanley, B. F.
Stanley, J. C.
†Stearns, Edwin
Stone, Jacob
†Sumner, John
Tappan, Samuel B.
Tilton. Enoch
Titcomb, Paul
Toppan, Edward S.
†Walker, Dexter M.
†Williams, Robert
Winkley, J. Otis
Winkley, Paul T.
Wood, David

## NORTH ANDOVER.

†Appleton, S. F.
Bailey, Charles P.
*Berry, Jacob
Blake, J. P.
Butterfield, Charles A.
Carlton, Daniel
Carlton, Joseph,
†Crosby, Josiah
Chever, Wm. J.
Davis, George G.
Davis, George L.
Dale, William J.
Dale, William J. Jr.
Dole, Francis F.
Farnham, B. H.
Farnham, Jacob
Farnham, J. L.
Foster, J. Frank
Foster, John P.
†Foster, J. Prescott
Foster, William
Foster, Samuel
Foster, Orrin
French, George
French, J. D. W.
Fuller, Abijah P.
Gage, John C.
Goodhue, Hiram P.
†Green, Arthur M.
Gardner, D. F.
Hill, Samuel B.
†Jaquith, Christop'r P.
Jenkins, Benjamin F.
Jenkins, Milon B.
Johnson, Theron
Kittredge, Joseph
Loring, Geo. B. Jr.
Manning, John
Montgemery, Jas. A.
Nason, James
Osgood, Isaac F.
Peters, Nathaniel
Peters, William
Phelps, W. W.
Phelps, H. L.
Poor, James
†Poore, Matthew
Reynolds, James H.
†Slade, Jarvis
†Spaulding, Amos
Spofford, Farnham
Stevens, Moses T.
*Shattuck, Thomas C.
Sutton, Eben
Symonds, Frederick
†Wardwell, Orin
*Weed Dan
†Wilson, Abiel

## PEABODY.

Abbott, Alfred A.
Allen, Lewis
Appleton, Francis H.
Ayer, Hazen
Bancroft, Sidney C.
Barrett, E. P.
*Basford, P. R.
Batchelder, Malachi F.
Blaney, Stephen
Bodge, Horatio
Buxton, Daniel, Jr.
Buxton, Joshua
Buxton, Robert G.
Clement, John B.
Colcord, J. L.
Cook, Henry
Curtis, Andrew
*Davis, Mark
Fairfield, Joseph
Felton, William H.
Flint, Horace P.
Flint, Thomas
Foster, James B.
Goodale, Byron
Goodale, J. P.
†Gunnison, Elisha
Hardy, Isaac
Hills, Benjamin M.
†Hoyt, Joseph
*Hubbard, John L.
Huntington, Benjamin
Hutchinson, Samuel
Jacobs, Edward W.
*King, Amos
King, Eben
King, Henry A.

King, James P.
King, Jonathan
King, Perley
Little, William H.
†Low, Caleb
Marsh, Frank
Marsh, James
*Marsh, John
*Marsh, Philip
*Merrill, Wingate
Messer, F. B.
Needham, Joseph S.
Osborn, Abraham C.
Osborn, David
Osborn, Kendall
Osgood, Joseph
*Peirson, A. L.
†Phillips, Alonzo P.
*Poole, Fitch
Poor, Eben S.
Poor, Henry
Potter, William
Preston, Moses
Proctor, Abel
Proctor, John W.
*Proctor, Thorndike
Richardson, W. B.
Saltonstall, Henry
*Sanger, Abner
Sawyer, Asa
†Scott, Benjamin
Shackley, Moses A.
Southwick, Sumner
Stevens, John V.
Sutton, William
Sweet, Samuel
Underhill, J. C.
*Upton, Eben S.
Upton, Stephen
Viles, Bowman
Walcott, John G.
Wallis, David B.
Walton, George D.
Ward, Winsor M.
Wheeler, Benjamin
Wheeler, Benjamin S.

## ROCKPORT.

Blatchford, Eben
Estes, Alden C.
Haskell, Benjamin
Hodgkins, John B.
Lane, Andrew
Lowe, Martha J. Mrs.
Lowe, William
Manning, James
Manning, John J.
Manning, William N.
Marshall, John W.
Mills, Richard P.
Norwood, Gorham
Patch, William H.
Pool, Ebenezer
*Row, Ebenezer
Rowe, Jabez
Smith, Allen
Smith, Allen, Jr.
Smith, Beman C.
Smith, David

## ROWLEY.

Blodgette, George B.
Cressy, J. S.
Dole, Charles
Dummer, N. N.
Foss, Joshua
Hale, Clara A.
Hale, Daniel J.
Hale, Joseph
Hale, Thomas
Lambert, Mary Mrs.
Mighill, Charles O.
Nelson, D. Oscar
Payson, Moses P.
Pike, John
Potter, Edward H.
*Proctor, George
Smith, George J.
Titcomb, Albert
Todd, Daniel G.
Todd, John F.
Webster, Charles E.

## SALEM.

Andrews, Randal
Andrews, Samuel P.
Barton, Gardner
*Barton, William C.
*Bowdoin, Willard L.
Brookhouse, Rob't, Jr.
Chamberlain, James
Chase, Stephen A.
Chase, William
Collins, William
Cressy, Josiah P.
Cross, John D.
Daland, John
Endicott, William C.
Endicott, William P.
Felt, John
*Ferguson, Joseph B.
Fiske, Joseph E.
Foote, Caleb
Foster, Joseph C.
Foster, William H.
Foster, William J.
Goodhue, William P.
Gray, Benjamin A.

Hathaway, John
*Huntington, Asahel
Ives, John M.
Ives, John S.
Ives, William
Jones, Samuel G.
Kimball, James
Kinsman, John
Lee, John C.
Lord, William
Loring, George B.
Mack, William
Maloon, William
Manning, Robert
Merritt, David
Messervey, William S.
*Metcalf, Benjamin G.
*Milton, T. Payson
Moody, H. L.
Morse, Ebenezer H.
Newcomb, Caleb
†Nichols, George, Jr.
Northend, William D.
Noyes, E. K.
Oliver, H. K.
Oliver, Samuel C.
O'Shea, M.
Peabody, John P.
Peirson, Edw. B.
Perkins, E. R.
Perkins, J. C.
Phillips, Willard P.
Phippen, George D.
Pickering, John
Potter, Daniel
*Proctor, William
Pulsifer, Joseph
Roberts, William
†Robinson, J. A.
Rogers, A. D.
Rogers, George W.
*Rogers, Richard S.
*Russel, John L.
Saunders, Robert J.
Saunders, Thomas
Saunders, William
Smith, Andrew
*Smith, Caleb
Stimpson, James C.
Story, Augustus
Stowe, Volney C.
Streeter, Gilbert L.
Ware, Horace
Ware, Horace C.
Wentzell, David
Wheatland, Henry
Winkley, Enoch
Woodis, Alden B.
†Wyman, Rufus

## SALISBURY.

†Ayer, James H. B.
Clark, Thomas J.
Currier, Jacob
Currier, W. H. B.
Evans, Benjamin
*French, Moses
Gale, Josiah B.
Pray, Rufus

## SAUGUS.

Hatch, Anthony
Houghton, Thos. O. W.
Newhall, Herbert E.
Penney, George H.
Robinson, E. P.
*Sweetzer, George H.

## SWAMPSCOTT.

Mudge, E. R.
Palmer, John P.
Phillips, J. B.
Pitman, Samuel C.
Stetson, Charles A.
Washburn, John

## TOPSFIELD.

Adams, B. P.
*Balch, Abraham
Batchelder, Ezra
Bradstreet, Dudley
Clark, David
*Cleaveland, John
*Elliott, Israel D.
Emerson, Thomas P.
Gould, Ariel H.
Herrick, Charles
Hood, S. D.
*Hubbard, William
Lamson, J. Arthur
Leach, Thomas K.
Manning, James
Munday, William
Peabody, Charles J.
Perkins, Moses B.
Pierce, T. W.
Poole, Benjamin
*Rea, John, Jr.
Ward, Richard
Wildes, Moses
Wilson, James
Woodbury, Isaac M.

## WENHAM.

Abbott, Joseph B.
Alley, Henry
*Batchelder, Joseph
Bodge, Richard F.
Dodge, Andrew
*Dodge, Ezra
Dodge, George A.
Dodge, George F.
Dodge, Rufus A.
Edwards, Francis R.
Fiske, Alfred R.
Gould, Amos
Hadley, Franklin
Hobbs, A. F.
Hobbs, Henry
Morgan, William B.
Peabody, George W.
Parsons, George W.
Patch, Henry
Pingree, William G.
Porter, William
Robinson, John L.
Tilton, George H.
Waters, Robert H.

## WEST NEWBURY.

*Bailey, Uriah
Boynton, Eben W.
Brown, Hayden
Brown, Osgood
Brown, Robert L.
Carr, George W.
Carr, James
*Carr, Moses
Carr, Samuel
Chase, Samuel S.
Follansbee, B. A.
Goodridge, David L.
Goodridge, Horace M.
Goodridge, Joseph
*Goodwin, Thomas C.
Gordon, Joseph Z.
Gowen, Ezekiel
Griffin, B. F. S.
Hosam, George
Jaques, Romulus
Little, Edmund
Little, Otis
Merrill, Elbridge
Merrill, William
Merrill, William E.
Moody, Samuel, Jr.
Moore, Alfred L.
*Mosely, Charles C.
Moulton, Daniel
Nelson, Daniel P.
Newell, Joseph
Nichols, Daniel P.
Noyes, Anson W.
Noyes, Stephen E.
Ordway, Cyrus K.
Ordway, George N.
Ordway, Hanson
Ordway, Thomas G.
*Pillsbury, Daniel
Poor, Moses H.
Poore, Amos
Poore, Ben : Perley
Poore, George H.
Ridgway, M. Moses
Ridgeway, Sarah L.
Rogers, Calvin
Rogers, Charles
Rogers, George C.
Rogers, Hiram
Smith, Amos
Smith, David
Smith, James
Smith, Moses
Stanwood, Moses P.
Thurlow, George
Thurlow, Stephen C.
Thurlow, Thomas C.
Titcomb, Silas M.
Tozer, Hiram

# NON-RESIDENTS.

Balch, Wm. H., Malden ;
Bodwell, Jos. R., Hallowell, Me.;
Brackett, H. Clark, Virginia ;
Clark, Jos. F., Boston ;
Currier, Wm. A., Boston ;
Chapin, W. C., Providence, R. I.;
Cleveland, N., Jersey City, N.J.;
Cleveland, H.W. S., Chicago, Ill.;
Colby, Chas. A., New York ;
Chase, Jos. S., Malden ;
Cary, James, Quincy ;
Caldwell, Luther, Elmira, N. Y.;
Cary, James, New York ;
Dow, Lorenzo, Laconia, N. H. ;
Eaton, Thomas, Harristown, Ill.;
Flint, Chas. L., Boston ;
Fowler, W. W., Plymouth ;
Gannett, W. W., Boston ;
Green, John A., New York ;
Hubbard, J. G., Hampstead, N.H.;
Hill, Moses, Revere ;
Hayes, J. F. C., Iowa ;
Kimball, Jona., Boston ;
King, D. Webster, Boston ;
Lyford, Geo. H., New York ;
Lake, Chas. H., Churchill, Md.;
Maynard, Lambert, Boston ;
Merriam, Arthur M., Colorado ;
Norwood, Gorham, Gorham, Me.;
Nichols, Albert, Chicago ;
Ordway, G.W., Manchester, N.H.;
Oliver, John E., Lynn ;
Parker, James M., Boston ;
Putnam, Benj. C., Chelsea ;
Payson, T. E., Providence, R.I.;
Page, Adino, Metamora, Ill.;
Porter, Wm. F., Cambridge ;
Poor, Henry, New York City ;
Payson, Sam'l F., New York ;
Rogers, William, Illinois ;
Rogers, Benjamin, Malden ;
Raymond, John W., Florida ;
Snow, Jesse W., Boston ;
Sargent, G. P., Philadelphia, Pa.;
Stickney, Niles T., Oskosh, Wis.;
Stanley, Sam'l S., Charlestown ;
Titcomb, Chas. W., Boston ;
Whittemore, Chas. A., Boston ;
Ware, Darwin E., Boston ;
Whittemore, J. R., Chicopee ;
Wheeler, H. T., Worcester ;
Webb, Michael Jr., Cambridge.

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# TRANSACTIONS

OF THE

# Essex Agricultural Society,

IN MASSACHUSETTS,

FOR THE YEAR 1874,

WITH THE

FIFTY-SECOND

# ANNUAL ADDRESS,

BY

JOHN L. SHOREY, ESQ.

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There is, perhaps, no subject which has been so long before the public mind, upon which there yet remains so great a degree of misunderstanding and confusion, as upon the true relation of agriculture to the other great industries of the world, considered both as to its importance and as to its desirability as a vocation. To bear out this assertion, witness the query so often put to us as a crucial test, "Does farming pay?"

As if agriculture, an industry coeval with the foundation of civilized society, and underlying its very existence, were in its multiform phases thus to be summed up and disposed of; thus to be weighed in the financial balance of the smallest brain, perhaps, forsooth, to be found wanting. As well might be propounded the question, "Does mercantile business pay?"

The answer would not be different. Trade is a necessity evolved from the conditions of civilization, and admits of no general reduction to a financial basis. It will or will not pay, according to the circumstances under which it is carried on, and according to the ability of the trader.

Any view which regards a given pursuit as attended with a fixed rate of remuneration, determined by the nature of that pursuit, is necessarily false; for as surely as water seeks its level, the same amount and quality of labor, whether of brain or muscle, will in no instance long receive other than the same pecuniary compensation, whatever be the industry upon which such labor is expended.

Is the shop more profitable than the farm, the shop becomes crowded, and many a farmer's boy, who, led on by greed of gain, is launched upon the manufacturing town, now out of work, his hopes dashed to the ground, at last, in the forced calm of weariness and despair, awakes to realize an irreparable loss of health and manly vigor,—a loss more bitter that the glare of short-lived prosperity by which he was allured has faded and gone forever.

This law of equal compensation for the same amount and quality of labor, depends upon well-known relations of supply and demand. It has lately received an excellent illustration in two of our leading cities. Upon the great fire at Chicago, such was the rush of laborers and artiasns to that city, in anticipation of a large demand and consequently increased pay for their services, that not only were their expectations defeated, but those who from choice or necessity remained behind were the real gainers, from the increased demand that sprang up at home.

But kind or quality of labor is a more important consideration than mere quantity. The mechanic is paid according to his skill, the professional man according to his ability; and that is evidently the highest kind of labor which will employ the greatest amount and variety of individual capacity.

What does the artisan with his brain? The more practised his hand, the more mechanically does he perform his round of tasks; and the nearer he attains to a mere machine, the more perfect is his workmanship. But though the hand of the farm laborer must be intelligently directed, he needs not to study ceaseless uniformity, but must with judgment constantly determine adaptation of means to ends in changing combinations.

From the more simple phase of industry as represented by labor, we now pass to the consideration of capital—an element which at the outset might seem to disturb this balance of pay among different industries. But a closer examination will serve to show, that none the less securely is the capitalist bound with certain conditions by which his gains are limited

to the measure of his energy and skill, and by the nature of his employment, only so far as it affords less or larger room for enterprise.

Is the demand for a certain article greater than the amount of capital engaged in its production can readily supply, the profit becomes greater than common, and immediately capital is attracted from other less paying employments, and will continue to flow in until profits reach the common level. It is hence readily seen that none of the great industries which are by nature permanent, and which afford an unlimited field for the investment of capital, can long remain upon other than an equal footing.

A striking verification of this law of equal profits is afforded by the consideration of risk: the more striking that this element is the greatest apparent cause of disturbance. Great risk may be defined as a certainty of small returns in the aggregate, with an equal certainty of large returns in single instances; and it is plain that the only fair basis of such investment is founded upon large immediate returns. Accordingly it will be found, other things being equal, that profit and risk increase or diminish in a direct ratio. The best example of this is seen in the different returns which the money-lender receives under different conditions of risk. In the recent panic, among other causes, the uncertainty of almost any security contributed to establish in many instances enormous rates of interest.

It is not to be denied, however, that to this rule of equality in profits and wages there are exceptions, which, though they cannot everywhere long continue, are none the less real where or while they exist; and these exceptions are found where, as in very new or old countries, the relations of capital and labor are such as unduly to favor the one interest or the other,—a question partly of population, and partly of the distribution of industries.

Trusting you will pardon this review of recognized laws of political economy, doubtless well known to you all, and to

which I shall constantly refer throughout this essay, I shall proceed somewhat briefly to argue in support of the positions already taken with reference to agriculture in general, and to discuss the subject with special reference to New England.

Were the intelligent observer asked to point out the financially successful of this country, he would doubtless seek them among the merchants; yet statistics show that only two or three out of every hundred who enter upon a so-called business career ever reach the goal. As for the rest, one by one they become lost to view behind the crowd of new competitors who press to the front, themselves to be displaced in turn: while thus to the superficial gaze, the on-rolling tide of humanity seems always the same; but beneath that wave how many sunken hopes lie hidden! And yet in the face of such appalling facts as these, no one quits mercantile life because of its reverses, for the fact is there well recognized, that failure or success depends upon personal effort.

Even the very circumstances by which the enterprising man surrounds himself are so balanced as to show him no peculiar favor. Is the merchant's store in a locality favorable for trade, his rent is correspondingly high. Is the farm near the market, and the land therefore valuable, rents, or as the farmer is generally both landlord and tenant, taxes are greater.

Again, the farmers' risks are less; for what can be more secure than land, which is his chief possession. True, risk may be covered by insurance, but insurance is only the price of estimated risk; and the very willingness of the merchant to insure shows how important is this consideration.

There is a vague notion afloat that the devotion of a country to other pursuits, to the exclusion of agriculture, will ultimately destroy that industry; but the very opposite is shown to be the case. Twenty years ago the legislative policy of California was to favor the mining interest at the expense of every other. Now agriculture receives more consideration.

The reason is not hard to perceive. As the manufacturing population increases, the demand for the produce of husbandry

must increase in an equal degree. To the measure of city growth must the resources of the country be developed; so that the lament, often heard from agriculturists of this section that the great interests are here centering in manufactures, should change to tones of gladness at the better opportunities sure to come; opportunities, perhaps, even now knocking at their door, could the welcome summons be detected by ears strained only to catch sounds of approaching storm.

Again it is said that the opening to tillage of new fields rich and vast is prejudicial to the interests of all other kinds of husbandry.

Statistics plainly show that the great food-exporting nations are not inhabitants of new countries, but of regions where land is divided into minute portions, subjected to the so-called high-farming process. The facility with which trade, foreign or domestic, is supplied through the medium of market-centers great and numerous being within small areas of immense productiveness, the less comparative cost of labor, owing to the density of the population, are among the causes which give to France and Belgium their agricultural pre-eminence.

I instance not these cases in the fulsome adulation not uncommon to be addressed to countries other than our own. Their prosperity is of a nation, and often at the expense of individual comfort and happiness. The cheap labor resulting from a teeming population is not ours, nor do we envy the wealth which it may bring to a few. I only instance them to show that great productiveness has not resulted from the tillage of large areas by individuals, for which some of the reasons are given above, while more are to follow in the comparison to be adduced between Eastern and Western farming in the United States; for in as much as between ourselves and these old and densely populated countries, with whose agricultural industries we could scarcely hope to compete, the broad seas interpose an effectual barrier, our only concern is with the rival sections of our own country.

But first let us consider the question of farm-labor, which, though it offers problems theoretically most difficult of solution, yet, as will readily appear, practically settles itself.

In New England, and the older portions of the West, the manufacturing population is centered in cities; and the more remote agricultural districts, in which the fertility of soil even originally good has been exhausted with but limited power of renewal, will no longer support the natural increase of population. Capital, as represented by the value of land, remains stationary; labor is over abundant, and hence under paid. But a remedy more than equal to the difficulty is found in a widely diffused taste for city life, that leads our boys away from the farm, and makes the time they are compelled to stay seem almost a hardship: so that, as in a similar instance before cited, it may even happen that those remaining are so few as to alter the balance in favor of home labor.

To go beyond the mere laborer, let us take the case of the young man who, with little or no capital, but plenty of energy and pluck, has decided to go where land is rich and abundant. Such is a common type of the Western pioneer. To go where land is still to be obtained at government prices, the settler must go far beyond the region of cities. For an habitation he hollows out the earth, roofs the excavation with logs and thatch, and over all piles earth again. Earth covered and earth surrounded, the first winter he may be obliged to quit his burrow for the plains, there to obtain subsistence by hunting buffalo. At last he is enabled to procure a few cattle; his fortune is begun. Is he prepared so long to endure separation from all that goes to make life pleasant to a social being, ultimate success is well nigh certain. This is not an exaggerated picture. Many a stock-farmer who can count his herds and flocks by the hundred, thus began; and who will doubt that such energy and perseverance would win its way at home.

The grand distinction between the Eastern and Western beginner of farm-life,—and I admit its force,—is that the

pioneer, having once for all placed himself under conditions of privation and self-denial, is compelled to stay, or suffer the mortification of a retreat; while the New Englander must form and control the drift of circumstance, and from amidst the temptations and enervating influences of advanced civilization, stand forth strong and earnest in pursuit of a success only to be earned at the "price of eternal vigilance."

I have said the pioneer must go far; and this includes the fact, not everywhere recognized, that the older settled portions of the West are no longer to be advantageously tilled by the so-called skimming process. That no soil can long remain in its natural condition while growing crops, is a self-evident truth; and to supply the exhausted elements of fertility, capital, is necessary. And thus, it is seen that with the one exception just mentioned, of stock-raising where pasture is common, agriculture, as much as any other pursuit, is concerned with capital, which here represents not only labor but fertilizing power.

The amount of capital that may be profitably employed in working a given farm, though not a simple question is yet roughly determined by the price of land, which depends upon locality (all of which I shall endeavor to show farther on); and thus agriculture is reduced to the same basis as any other industry upon which capital is engaged, the pecuniary returns depending, other things being equal, upon the amount of capital invested; which amount is here denoted by the value of the land employed, together with the cost of working it.

The main difficulty in the comprehension of this question lies in the fact that a man is apt to think, because a farm is large, that it ought to pay, no matter how little it is worth. A small amount of money up in New Hampshire will buy a large amount of land. Many a farm in New England is not worth $1,200; and the wonder is, how, upon so little capital, large families are maintained. The small returns of a farm that, never fertile, yet for generations to come, will furnish an humble support to the husbandman content to receive it as

an inheritance, returns more than commensurate to the slight value of the land, by no means necessarily discourage investment; and to the possessor of a little means, who would be unencumbered with the cares which attend even a successful strife for wealth, the farms of Northern New Hampshire offer a snug retreat.

But not in all parts of New England does this stationary condition of agriculture exist. Sections such as our own county represents, from their nearness to large cities, receive benefit from the very causes that work disadvantage to remoter regions. Here, farm-land is constantly rising in value from the enlargement of city limits, not to mention encroachments upon our domains by city wealth in the form of country houses, or elegant villas for summer residence. Bearing in mind, then, that the small amount of capital which many of our farms represent is in itself sufficient reason for small returns, let us consider what, if any, are the real drawbacks to the pursuit of agriculture in New England.

One of the first questions that suggests itself is, Will not the South and West pour in upon our markets out of the abundance of their agricultural resources?

For a time the very poverty of the frontier settler operates in his favor. Content with almost anything, in the way of luxuries which older sections from the variety of their industries can furnish in exchange for his raw material, he bears the disadvantage which he cannot overcome, and brings into play almost as disturbing an element as the cheap labor resulting from the opposite extreme of over population. But as year after year the tide of emigration pours in upon the frontier, bringing with it other industries by which the wants of civilization are supplied and home markets furnished to the agricultural community, this source of danger to our interest is lessened.

That the disadvantage under which the distant producer labors in competition with our home farmer is very great, might sufficiently appear from the consideration of the cost

incurred, and waste in transportation. But a condition inseparable from the cultivation of large areas of cheap land is distance from local markets; and this condition becomes doubly unfavorable when viewed in the light of the fact already mentioned, that no soil can long be made to yield even a fair return to mere tillage. For if it is conceded to be an axiom that a constant renewal of fertility is a necessity of continued production, it is surely no great leap by which we come to the conclusion, that, other things being equal, the successful conduct of a tillage farm depends upon the cost of manuring the land. And it is further evident, that where population is most dense, this condition is best fulfilled.

Were I asked to point out the best paying farms of this country, I should seek them not where land is cheap and agriculture conducted on a vast scale, but upon the outskirts of some metropolis, — as for instance among the market-gardens about Boston, the secret of whose success is hidden only by the shades of night, when cart-load upon cart-load, the waste of city consumption, is conveyed back to the outlying farms; and thus while the world is sleeping, is supplied, as to a growing boy, such vitalizing gain as more than balances the daily loss. Nowhere better than in such sections of city-surrounding country as our own county represents, can the system of high farming be carried to perfection. The nearness of the consumer furnishes a ready market for vegetable products which from their perishable nature demand immediate consumption, while unrivaled facilities for obtaining fertilizers leave a margin for profits which can scarcely be equaled in places more remote. It must not be forgotten, however, that such favored sections have also their disadvantages. Little is the skill and capital needed profitably to raise field crops, compared to that which can enter upon market gardening with reasonable expectations of success.

But a comparatively small number of husbandmen, either East or West, are in a position to warrant high farming; and

this brings me directly to the consideration of the question, "What is the proper size of a farm?"

Many persons are universal advocates of small farms, and take every opportunity to establish their case by theory and example. For authority they are fond of going back to the ancient Romans, among whom agriculture was in great esteem, and whose writers invariably held that a small area thoroughly tilled, possessed every advantage over a larger tract poorly cultivated; a precept valuable as applying to the husbandry of thickly settled districts, such as the region of Rome then was.

Few would be so unwise, however, as to contend that the stock-raiser on our Western plains ought, for the better prosecution of his calling, to fence in a small tract of land. Rather let him range over that vast common, and watch his increasing herd, paying no attention to bounds or limits. He is the gainer, and the soil can suffer in nothing; and herein is contained a suggestion leading to a simple solution of this problem. We here perceive that the kind of production, and the amount of land to be employed are mutually dependent. But there is yet room for further deduction, and, presuming same amounts of capital, it is seen that the size of a farm, and character as well, are determined by the distance and importance of the nearest commercial centers.

This rule demands further statement and illustration. In the degree that tillage land is cheap, and markets far,—conditions which commonly co-exist,—should the farm be larger, and devoted to that interest which calls for less expense in cultivating. In other words, where land is cheapest, the cost of working it should be reduced to a minimum; and this least cost of working is best represented by the growing of stock, which by natural means supply their own waste; while, on the contrary, where land is very dear, only such an amount of capital should remain in the land as will leave in the hands of the possessor working capital sufficient thoroughly to till that land; to which an exact parallel is afforded by the mer-

chant, who in a locality favorable for trade, and therefore commanding high rent, occupies as little room as the proper conduct of his business will permit; otherwise, a certain part of his capital would be, as it were, locked up and therefore useless. On the other hand, corresponding to the stock-raiser, is the storage dealer, who, in a place where rent is low, is enabled with profit to furnish accommodation for goods at less cost than the seller can keep them on hand, and whose gain is therefore room.

Between the two extremes represented by the market garden and the stock-farm lie means infinite in number and minute in degree; one of which is the milk-farm, involving, as properly conducted, the whole science of the soiling of cattle, and the best methods of breeding for milk; often carried on in connection with the raising of roots and vegetables, both for the market and for consumption upon the farm. Such is the character of my own estate. Lying half way between the markets of Lynn and Salem, with facilities for procuring fertilizers at a moderate cost, I yet find it advantageous to provide for an additional supply by maintaining live stock upon the place. For the sake of perspicuity of statement, I may say that the part of my farm devoted to the production of milk receives its renewal of fertility from the dozen head of cattle in my barn, aided by the necessary complement of swine; while the waste resulting from the growth of marketable produce is supplied from the stables and barnyards of the city. In order to preserve the equilibrium of fertility throughout the sixty acres of arable land contained in the farm, it is further necessary so to change the location of the vegetable garden year by year, that in a given length of time the whole area may have been taken up and relaid to grass.

It is thus seen, that, where manure is not to be purchased to advantage, the introduction of live stock is the only means of preserving the fertility of the soil. Hence, according as a farm is devoted more to garden or field crops, is it found profitable to support a less or a larger number of live stock.

The farthest limit which the New Englander can attain in the direction of stock-raising is the dairy farm; and though up to this point there is absolutely no reason why New England farming should not pay, and, as I have endeavored to show, there is every evidence that it does yield a fair return as gauged by other pursuits,—capital, skill and risk considered,—yet it is certain that beyond this we cannot go. For the pure stock-farm, the plains of the Far West offer their vast extent of common, with climate so mild as often to render useless the labor of the herdsman in providing winter's food or shelter. It may prove that under the influence of those fertile fields and sunny pastures, live stock will degenerate,—that the rugged hills and severer climate of New England are better fitted to maintain the vigor of the parent stock. Be this as it may, the greater price of less fertile pasture and the long wintering far more than counterbalance any advantage that could possibly be derived from nearness to markets; and the New England farmer has done well to abandon all effort to make stock-raising generally profitable.

Upon the methods and uses which now obtain in the various branches of husbandry, it is scarcely the province of a general essay to enter; and especially with regard to details of observation or experiment, such an effort could lead to no satisfactory result. Indeed, it is chiefly owing to a desire on the part of many agricultural writers, from the narrow basis of their own experience, to establish rules for general practice, that a contempt for so called book-farming has sprung up among practical agriculturalists. Not altogether is the writer to be blamed. To be carried away with theories which owe their birth to one's intellectual travail, is the most natural thing in the world; and the learner seeking for truth, ought to take into consideration this enthusiasm of a writer over his own productions and weigh each statement as gold of suspected coinage. The results of experiments are seldom wilfully misstated, no matter how blindly truth and error are confounded in deduction; so that an impartial investigation

can scarcely fail to afford information of value to the inquirer.

It is then the part of the intelligent farmer to encourage every honest attempt in the way of agricultural literature; and especially ought he to consider the claim to his regard of its chief author and promulgator, the so-called fancy farmer, of whom it is safe to say, that from no class of agriculturalists are we to look for better things.

As the history of invention too plainly shows, the greatest contributors to the progress of the arts and sciences are not the men who make their calling pay. Here we farmers have among us men, for the most part representing wealth, intelligence, and a love for the pursuit, who are continually engaged in experiments, the substantial benefits of which, if any arise, are sure to be ours. They interfere not with our markets, they stop for no consideration of self-interest, save perhaps the single desire of being appreciated, which desire we are too slow to gratify.

Let us then listen to no more sneers at the fancy farmer and his calling. Rather, as we pull up the stakes of ignorant conservatism, and fall into the line which great industries are continually forming for the march of improvement, let us gladly accept and duly prize their proffered service, who, though liable to err in council, are yet faithful and willing guides.

But not beyond the proper scope of this essay, lies the discussion of facts or principles which are capable of exact statement, or thorough demonstration as to truth.

Such is not the relative or absolute value of commercial fertilizers, nor the efficacy of top-dressing; which last, however, as applied to certain soils, is commonly admitted. Of the former, though there is no general substitute for the natural manures, yet where, as in the forcing gardens of Arlington, the cost of any fertilizer is outweighed by the most trifling advantage secured by its aid, the manures of commerce are no doubt successfully employed.

I now pass to a subject, a full consideration of which would involve the whole science of agriculture, properly so called, but which is nevertheless in its main points capable of concise statement. I refer to the rotation of crops. To begin with the simplest proposition, it is self-evident, that, besides the elements of growth contained in air and water, a vegetable substance is made up from constituents of the soil. Chemistry shows us what these elements are, and in what proportion they occur in different forms of vegetable life. It remains then to ascertain what elements a given soil contains, and in what proportion, and we are ready to apply our principle. Let the elements of fertility contained in a given soil be represented by the letters A, B, C. We plant, for instance, a vegetable which contains the same elements as are represented by C. The original soil contains A, plus B, plus C. At the end of the year a certain amount of C is appropriated; and by the same process repeated a few successive years C becomes exhausted.

It is evident, as the vegetable produced contains only C, that A and B still remain in the soil. Then take another vegetable, the constituents of which are represented by B. That the product which called for the elements of fertility denoted by C can no longer be grown is no reason why a crop requiring B will not turn out as well as did the former the first season. And so we might go on until the sum total of the fertilizing elements denoted by A, B and C is exhausted, and the soil is, in common phrase, run out. It is thus seen that under the conditions here supposed, a succession of equally good crops is grown upon the same land, without any addition of fertility.

The vast economy effected in the productiveness of a given piece of ground, by the observance of this rule, becomes apparent upon the most cursory view. Old time farming saw the necessity of fallowing where soil had ceased to be productive of a given crop; and this constant lying idle of some part of the land is in reality just to what the neglect of the

principles of rotation leads to-day. Many a farmer, year after year, by preparing the same land for the same crop with an occasional fallowing, goes on piling up wealth of fertilizing power, perhaps only to be utilized by his more enlightened successor.

Simple, however, as is this underlying principle of the rotation of crops, it suggests problems most difficult of solution. It is easy to say, given the relative amount of fertilizing agents contained in a certain soil, determine the kind of production to which it is adapted; but it is not so easy to ascertain either the elements contained, or the best combination of those elements, to forward as well as to insure vegetable growth. We all know that different forms of food which contain about the same elements of nutrition, are different in their effects upon the human system, and the same seems to obtain of vegetable life, especially with regard to the stimulating qualities of certain manures. And it is upon this ground alone, as I have before hinted, that the efficacy of the manures of commerce may be established as affording that concentration with which is associated stimulating power.

Again it is found that a stated crop does not follow in rotation, with the same result, all crops to which it bears the same chemical relation.

But to turn from the complexities which the refinements of agriculture open to our view, the most marked effects of the workings of this great principle are to be observed in the crudest attempts at tilling the soil, and it is to nature herself that we look to behold the most striking instance of the law, that when there is no artificial renewal of fertility change becomes a necessity of long continued growth. Witness the ever-green forest, which once leveled by the woodman's ax, turns, or may it not be, returns to a deciduous growth.

The estimation in which any pursuit has been held in different countries at different eras, has been founded not necessarily upon its usefulness, nor even upon the kind or quality of labor or exertion demanded in its prosecution, but has been

determined by the character of the men who have been engaged in it, whether by choice, or it may be from the necessity of the times.

I have said before that agriculture was held in the highest repute amongst the ancient Romans, whose writers loved to tell how great generals, summoned to take command in the crises of the nation, were to be found at the plough and in the simple garb of the husbandman. Cincinnatus called to the dictatorship, Cato the censor, are instances familiar to the classical reader.

But it is evident that the crude agriculture of the time could afford little scope for anything but mere physical effort, and that the dignity of its position was owing to the fact that great men were accustomed to take up the business of husbandry when the management of affairs of state, their true calling, no longer required their undivided attention. In exact accordance with the foregoing is the decline of agriculture, when at a later day farms were let out, to a class of Roman citizens whose condition was but a slight remove from that of the slave.

Where in the advance of civilization the cultivation of the arts of peace has become of paramount consideration, though it is true that the nature of a given pursuit will sooner or later modify or even mould the character of its devotees, it nevertheless plainly appears that by the ability devoted to its interests is measured not only the progress of an industry, but the estimation in which it is held before the world.

Thus it is that mercantile business in this country has attained a repute hardly equaled by pursuits immeasurably superior in all that pertains to individual manhood. Is that the highest calling an exclusive devotion to which tends to make money won, or money lost, happiness or despair? To what then is this pre-eminence of mercantile pursuits owing, but to the fact that our merchants have shown themselves great in the ability and indomitable energy by which they have acquir-

ed wealth for themselves, and for their country a proud name among nations.

But the lustre which the light of favoring circumstance lends, time will dim. In this age of acute investigation, no calling can long stand upon a basis other than its intrinsic worth; and it is in the general diffusion of knowledge on subjects such as the relation of a given employment to individual advancement, that the surest means are found for the removal of existing misapprehension as to the relative dignity of the various pursuits.

In an article entitled "The Building of a Brain," lately read before the National Educational Convention at Detroit, by Dr. E. H. Clarke, is contained the following:—"Every physiologist knows that one-sided development is possible, and may be artificially attained. The athlete may develope his muscle, the glutton his stomach, and the sensualist his power, at the expense of the brain; and conversely the brain may be developed at the expense of muscle, stomach and reproductive force. And this inharmonious growth may be carried so far, by dwarfing more or less of the organization, as to produce what Physiology calls monstrous brains, stomachs, and the like: that is monstrosities which by a beneficent law of nature cannot perpetuate themselves." It is said also, "No perfect brain ever crowns an imperfect body. The brain must be built in connection with the rest of the body, remembering constantly that the imperfections of the latter reflect themselves upon the former."

This last appears to me to afford a standard by which the different pursuits may be justly compared; and it accordingly follows that the highest calling is that which leads to the greatest uniform development of the various faculties both physical and mental. Without going beyond his proper sphere, the farmer may possess the scientific knowledge of the chemist, the business capacity of the merchant, the practical hand of the mechanic, and withal a fair endowment of

common sense, whereby to turn to practical use the results of educational training.

Estimated then by the above criterion, what pursuit can compare with agriculture? and what nobler end can be attained by any calling than the preservation and advancement of the human race! For that such is the true significance of this uniform development, a glance at our city families will prove beyond a doubt. It will show that ease and luxury weaken the bodily powers, and leave each generation fewer in number, and less vigorous than its predecessor.

But whence the constant tide of life that bears all before it, and admits no apprehension lest it should recede, and leave the city stranded? It comes from the great families of our sturdy farming community.

In closing, I would revert once more to the poverty of New England farms situated far from commercial centers. I have said this state of things is no real drawback to investment, and that it is rather a matter of surprise that such small amounts of capital as they represent, can be made to support so many people as are found among our hills.

The one way to change all this is to raise up other industries in our midst, that shall bring markets nearer, and thus afford increased facilities, both for the production and disposal of crops.

But, my friends, the wealth and pomp of circumstance that would thus become ours, we should dearly purchase. To what, think you, is the noble character New England's sons have ever borne, chiefly owing?—their strong principles, their thrift, their industry, and the unflinching determination that overcomes all obstacles and places them in the first rank of every industrial or professional department,—to what is all this chiefly owing but to the early training which a life upon those hills alone can furnish.

What better preparation for the hard onward struggle of manhood, than the difficulties which the youth is there taught to surmount? Far from the luxuries which enervate, re-

moved from the influences which contaminate, rugged from strengthening toil, earnest from realities of life, yet softened by the shelter of home and purified by its love, where can we hope better to nourish the germ of manhood?

What wonder that New England farms cannot furnish sufficient scope to such,—their sons! Let then the farmer's boy go to the city: he will be welcome, as he is needed. But whatever his prosperity, let him preserve in grateful recollection the old homestead where were given the early lessons that formed the ground-work of his success.

But the farmer's boy who stays at home yields to no hard necessity. His gains, though small, are certain; and his life, though uneventful, is like the clear stream which reflects upon its placid surface the simple beauty of its course.

And not without deepest import is the quiet routine of farm life. It is not alone the rushing, surf-capped billow that forms the ocean. True, it bears the ship, but is itself borne up from silent depths below. And thus it is behind the new generations of farm-raised boys ever coming to feed the eternal fever of city life, that we must look to find the true well-spring of vigor to the country.

To the farmer's boy who stays at home all honor! for he is none other than the future representative and preserver of the old New England stock.

# THE EXHIBITION.

The Fifty-Fourth Annual Cattle Show and Exhibition was held at Danvers, September 29th and 30th, 1874.

The show of stock, poultry, &c., was very large, and the exhibition in the hall, especially of fruits and vegetables, was never excelled by this Society.

His Honor, Lieut. Gov. Talbot, and other distinguished gentlemen were present.

The following entries were made:

| | | |
|---|---|---|
| Horses and colts, | 119 animals. | |
| Cattle—working oxen, | 17 yokes. | |
| Town teams, | 20 " | |
| Bulls, milch cows, heifers, &c., | 82 animals. | |
| Steers, | 5 pairs. | |
| Fat cattle, | 6 " | |
| Sheep and Swine, | 75 " | |
| Poultry, | 117 coops. | |
| Agricultural implements, | 10 entries. | |
| Ploughing teams, | 19 " | |
| Carriages, | 7 " | |
| Articles manufactured from leather, | 7 " | |
| Bread and honey, | 30 " | |
| Flowers, | 61 " | |
| Counterpanes and Rugs, | 40 " | |
| Fancy work, &c., | 144 " | |
| Manufactures and general merchandise, | 17 " | |
| Pears, | 113 " | 416 plates. |
| Apples, | 140 " | 520 " |
| Grapes and peaches, | 12 " | 52 " |
| Vegetables, | 260 " | |

CHAS. P. PRESTON, Secretary.

# REPORTS, &C.

## FAT CATTLE.

The Committee award as follows:

Joseph Kittredge, North Andover, 1st premium, $12.

C. P. Mighill, Rowley, 2d premium, $10; do. do., 3d premium, $6.

*Committee*—Albert Titcomb, G. W. Herrick, Jonathan Chapman.

## BULLS.

The Committee on Bulls would report:

The number of Bulls of various breeds was quite large and the quality was very superior. For many years there has not been so good an exhibition of these animals in the county, and your committee congratulate the farmers upon the manifestly increasing interest in cattle-breeding, and on the wise policy they have adopted of selecting males of a high standard. It is unusual for us to find at our exhibition, a valuable young Shorthorn, several first class Ayrshires, and numerous excellent Jerseys, all so good as to perplex the committee in their judgment, as was the case at this time. It has been no easy task to award the premiums; but the committee have carefully considered the points of the animals submitted to them, their age, and the length of time during which they might be useful for breeding purposes; and with regard to the last consideration they have, other things been equal, given the preference to the younger bulls. The Jersey Bulls, for instance,

of Mr. Henry Saltonstall and Mr. T. W. Pierce, were much admired for their shape and quality. Better animals are rarely seen; and the committee would commend them highly to breeders of this stock. It is only on account of their age that the younger animals were considered to come more directly within the encouragement of the Society.

The Committee award the following premiums for bulls, two years old and upwards:

AYRSHIRES.

To J. D. W. French, of North Andover, for his bull Fitz James, the first premium, $12.00.

To Nathan P. Proctor, of Danvers, for his bull, the second premium, $6.00.

JERSEYS.

To G. W. Russell, of Lawrence, for his bull, the first premium, $12.00.

To John Swinerton, of Danvers, for his bull, the second premium, $6.00.

For Bulls under two years old:

To Henry Saltonstall, of Lynnfield, for his yearling Jersey Bull, the first premium. $6.00.

To W. J. Dale, Jr., of North Andover, for his yearling Jersey Bull, the second premium, $3.00.

SHORTHORNS.

To E. T. Northend, of Newburyport, for his yearling Bull, Essex, the first premium, $6.00.

DEVONS—TWO YEARS OLD AND UPWARDS.

To C. S. Bradley, of West Newbury, for his Devon Bull, the first premium, $12.00.

To Samuel C. Cook, of Wenham, for his Devon Bull, the second premium, $6.00.

DUTCH—TWO YEARS OLD AND UPWARDS.

To Joseph H. Knight, of Newburyport, for his Dutch Bull, the first premium, $12.00.

To A. Knowlton, of Essex, for his Dutch Bull, the second premium, $6.00.

For the best thoroughbred bull of any age or breed, with five calves of his stock, not less than one year old:

To J. D. W. French, of North Andover, $20.00.

To Volney C. Stone, of Salem, $10.00.

*Committee*—Geo. B. Loring, chairman; A. B. Fellows, P. T. Winkley, William H. Felton, Mark F. Hill.

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## MILCH COWS.

### FOREIGN, NATIVE OR GRADE.

H. G. Herrick, Lawrence, first premium, $18.00.

Henry Saltonstall, Peabody, second premium, $12.00.

J. D. W. French, North Andover, third premium, $6.00.

### AYRSHIRE.

J. D. W. French, North Andover, first premium, $12.00.

B. P. Ware, Marblehead, second premium, $6.00.

### JERSEY.

Henry Saltonstall, Peabody, first premium, $12.00.

G. W. Rogers, Peabody, second premium, $6.00.

### NATIVE OR GRADE.

Eben G. Berry, Danvers, first premium, $12.00.

*Committee*—H. G. Kimball, Elias Andrews, Z. C. Wardwell, John L. Shorey.

### STATEMENT OF H. G. HERRICK.

1 Milch Cow. Grade, Jersey and Shorthorn; 5 years old; dropped last calf April 1, 1874; will calve in March, 1875. Feed, English hay and 2 quarts of meal and 6 quarts of

shorts, or brewers' grains, per day; April and May mangolds; parts of June and July at grass.

She gave in April 1388 lbs. milk.

" " May 1456 "

" " June 1440 "

" " July 1317 "

" " Aug. 1175 " Giving in 5 mos. 6776 lbs.

28 days in Sept. 856 "

1st 10 days in June, 501 lbs.

1st 10 days in Aug., 371 lbs.

The 5th day of June she gave 57 lbs.

STATEMENT OF HENRY SALTONSTALL.

ROCKWOOD, WEST PEABODY, Sept. 29, 1874.

CHARLES P. PRESTON, ESQ., Secretary Essex Agricultural Society:

SIR:—I enter for premium in the class of "Thoroughbred Jersey Cows, 4 years old and upwards," my imported Jersey cows, "Diamond" and "Snowdrop," numbers 570 and 569 in the American Jersey Cattle Club Herd Register.

"Diamond" was 8 years old last July, and has been owned by me since importation in 1866. She was bred by John P. Marett, one of the best breeders in the Island of Jersey, and was specially selected and imported for me. She has always been an excellent milker and a good breeder, never having dropped an ordinary calf. Her time of calving, September 24, 1874, has prevented the record of her milk being kept as required by the Society, she being dry the last 10 days of August. Her previous calf was born August 5, 1873, and the last 10 days of that month she gave on pasture feed alone 18 quarts of milk a day. The first 10 days of June, 1874, she gave on pasture feed alone 4 quarts of milk a day. Seven quarts of her milk will make a pound of butter.

"Snowdrop" will be 6 years old October 17 next. She

was sired by a prize bull in the Island of Jersey. Her last calf was dropped April 30, 1874, and she is due to calve again April 30, 1875. Her milk record is as follows, in pounds:

| | Morning. | Evening. | Total. | | Morning. | Evening. | Total. |
|---|---|---|---|---|---|---|---|
| June 1, | 20½ | 20 | 40½ | Aug. 25, | 15 | 14½ | 29½ |
| 2, | 19 | 20 | 39 | 26, | 14½ | 14½ | 29 |
| 3, | 19 | 21 | 40 | 27, | 14½ | 14½ | 29 |
| 4, | 19 | 22 | 41 | 28, | 14 | 14 | 28 |
| 5, | 20 | 20½ | 40½ | 29, | 14½ | 14 | 28½ |
| 6, | 19 | 20 | 39 | 30, | 15 | 14 | 29 |
| 7, | 19 | 20½ | 39½ | 31, | 14½ | 15 | 29½ |
| 8, | 18½ | 20 | 38½ | Sept. 1, | 15 | 14¼ | 29¼ |
| 9, | 18 | 22 | 40 | 2, | 15 | 14 | 29 |
| 10, | 19 | 21 | 40 | 3, | 14½ | 15 | 29¼ |
| Total lbs. | 191 | 207 | 398 | | 146½ | 144 | 290½ |

Her feed in June was grass only. In August and September, the pasture being dry, she had a pint of corn meal and a quart of shorts twice a day. Taking the mean of the two trials above for the average of the whole time, her yield for three months was 34 4-10 pounds, or over 16 quarts a day. 6 1-2 quarts of her milk will make a pound of butter. Taking into consideration the quantity and quality of her milk, on light feed, I offer "Snowdrop" for the premium "for the best milch cow."

I also offer for exhibition, her age preventing her from competing for premium, my High Grade Jersey Cow, "Sibyl," 13-16 Jersey, 3-16 Ayrshire, dropped March 16, 1859, now 15 1-2 years old. Her pedigree is as follows: "Flora" was a very celebrated cow, her yield of milk and butter being noted in more than one Report of the Massachusetts State Board of Agriculture.

Colonel—Countess,

Major—Flora, Typhoon—Sylph.

Dick Swiveller, Gipsey,

Sibyl.

Colonel, Countess, Flora and Typhoon, were Jerseys, im-

ported by Thomas Motley, Esq. Sylph was a 3-4 Ayrshire. Sibyl calved June 4, 1874, and is due to calve again May 11, 1875. Her milk record for this year is as follows, in pounds:

| | Morn. | Even'g. | Total. | | Morn. | Even'g. | Total. |
|---|---|---|---|---|---|---|---|
| June 15, | 17 | 29 | 37 | Aug. 25, | 18 | 18 | 36 |
| 16, | 17 | 21 | 38 | 26, | 18 | 18½ | 36½ |
| 17, | 17 | 21 | 38 | 27, | 18½ | 19 | 37½ |
| 18, | 17½ | 20 | 37½ | 28, | 18 | 19 | 37 |
| 19, | 18 | 20 | 38 | 29, | 18½ | 19 | 37½ |
| 20, | 18 | 19½ | 37½ | 30, | 19 | 19 | 38 |
| 21, | 18 | 21 | 39 | 31. | 19 | 19 | 38 |
| 22, | 18½ | 21½ | 40 | Sept. 1, | 20 | 20 | 40 |
| 23, | 18½ | 21½ | 40 | 2, | 20 | 19½ | 39½ |
| 24, | 18 | 19½ | 37½ | 3, | 19 | 19½ | 35½ |
| Total lbs. | 177½ | 205 | 382½ | | 188 | 190½ | 378½ |

Her feed in June was grass alone. In August and September, the pasture being dry, she had 1 quart of corn meal and 1 quart of shorts twice a day.

The above record shows an average yield of 38 pounds, or nearly 18 quarts of milk a day for 3 months. It has always been very difficult to dry this cow for a few days at a time each year, and some years she could not be dried at all. Until after she was 12 years old she could not be fed with any grain—the increased pressure of milk bringing on inflammation of the bag in a few days.

In the year 1868, being then 9 years old, she calved April 7. Her milk was regularly weighed from that date to April 7, 1869. The result was a total yield of 13,065 pounds, or more than 6 1-2 tons, or about 17 1-2 times her own weight

of milk in twelve months. The detailed statement is as follows:

| | Days. | Lbs. per day. | Total lbs. |
|---|---|---|---|
| April 7 to June 1, 1868, | 54 | 55 | 2970 |
| June, " | 30 | 49 | 1470 |
| July, " | 31 | 44 | 1364 |
| August, " | 31 | 39 | 1209 |
| Sept'r, " | 30 | 34 | 1020 |
| Oct'r, " | 31 | 32 | 992 |
| Nov'r, " | 30 | 30 | 900 |
| Decemb'r, " | 31 | 28 | 868 |
| Jan'y, 1869, | 31 | 27 | 837 |
| Feb'y, " | 28 | 23 | 644 |
| March, " | 31 | 21 | 651 |
| April 1 to April 7, 1869, | 7 | 20 | 140 |

Her greatest yield was 60 pounds a day, for several days, and the average as 35 8-10 pounds, or say 17 quarts a day, for the whole 365 days.

STATEMENTS OF J. D. W. FRENCH.

To the Committee on Milch Cows:

I enter my Ayrshire cow, "Roxanna," 1816, Ayrshire Herd Book, (Dam, Rose, 743—Sire, McDonald, 3d, 263,) for the premium for the best Ayrshire cow, 4 years old and upwards. Record of milk, feed, &c., will be found on accompanying paper.

I have also entered the following Ayrshire cows, which have been unable to comply with the rule, as to the time of weighing milk, on account of their time of calving:

"Dolly," 342. Calved April 13, 1864. 10 years old. (Sire, Harold, 149—Dam, Jean Armour, 91.) She dropped her last calf July 31. Began to weigh her milk August 5, and in 27 days up to September 1, she gave 934 1-2 pounds of milk, on pasture, and a little green fodder at night the last

of August. She gave last September, after calving, 22 qts. per day.

"Jennie Gray," 477. Calved February 16, 1867. 7 years old. (Sire, Duncan, 161—Dam, Rosa, 186.) She dropped her last calf August 31.

I enter my Ayrshire cow, "Roxanna, 1816, A. H. B. Calved April 10, 1870, thus 4 years old last April, and bred by me, for the premium for the best Milch Cow of any breed, with satisfactory evidence as to milk, manner of feeding, &c.

"Roxanna" dropped a bull calf (her second calf) December 23, 1873. On the 24th I began to weigh her milk, and since then have weighed it daily.

RECORD OF MILK.

| | | | |
|---|---|---|---|
| During the remainder of | December, . . . . | 259 1-2 | lbs. |
| " | January, 1874, . . | 1047 1-2 | " |
| " | February, " . . . | 853 1-2 | " |
| " | March, " . . . | 891 | " |
| " | April, " . . . | 768 3-4 | " |
| " | May, " . . . | 765 | " |
| " | June, " . . . | 787 3-4 | " |
| " | July, " . . . | 789 1-2 | " |
| " | August, " . . . | 698 1-2 | " |
| | | 6861 | lbs. |

Taking 2.15 as the standard weight of 1 quart of milk, 6861 lbs.=3191.11 qts., or 12.71 qts. per day for 251 days. During the first ten days in June she gave 257 1-2 lbs. of milk. During the last ten days of August, 223 3-4 lbs. Time of next calving, February 23d, 1875.

During the winter she was fed good hay morning and afternoon, (with a baiting of poor hay at noon,) 1 quart of meal and 1 peck of mangolds per day.

After turning out to grass the last of May, she received nothing in addition to the pasture until the last of August, when some green fodder was given. Her weight is 830 lbs.

STATEMENT OF BENJ. P. WARE.

I offer for premium my thoroughbred Ayrshire cow, "Miss Mavis, 4th," born August 25, 1869, whose dam was Miss Mavis, 3d, grand dam was Miss Mavis, she imported by Sanford Howard, Esq., for the Massachusetts Society for the Promotion of Agriculture; sire Ducet, bred by George B. Loring, (see herd book,) he by Johnnie 34, dam Posey 129, he by Essex 22, dam Star 129.

Her feed during the summer has been grass and corn fodder, in the barn in the forenoon, and pasture in the afternoon,—she has had no grain, or other feed. She calved last 15th of June, and will calve next May 13th.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| She gave, | August | 22, | Morning | 14 | lbs. | 6 | oz. | Evening | 13 | lbs. | 0 | oz. | Milk. |
| " | " | 23, | " | 13 | " | 6 | " | " | 12 | " | 6 | " | " |
| " | " | 24, | " | 13 | " | 2 | " | " | 12 | " | 2 | " | " |
| " | " | 25, | " | 15 | " | 6 | " | " | 12 | " | 6 | " | " |
| " | " | 26, | " | 13 | " | 0 | " | " | 14 | " | 2 | " | " |
| " | " | 27, | " | 12 | " | 2 | " | " | 13 | " | 6 | " | " |
| " | " | 28, | " | 13 | " | 2 | " | " | 13 | " | 2 | " | " |
| " | " | 29. | " | 13 | " | 0 | " | " | 13 | " | 2 | " | " |
| " | " | 30, | " | 13 | " | 6 | " | " | 13 | " | 0 | " | " |
| " | " | 31, | " | 13 | " | 2 | " | " | 13 | " | 6 | " | " |

STATEMENT OF E. G. BERRY.

I present for premium one grade Dutch and Ayrshire, six year old cow. Quantity of milk during first ten days of June, 184 quarts, and the last ten days of August 153 quarts.

Owing to alteration of street the entire length of my farm, I was obliged to tether her for pasturage. Extra feed, 2 qts. of meal per day.

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## HEIFERS.

J. D. W. French, North Andover, Ayrshire in milk, 1st premium, $12.

J. D. W. French, North Andover, Ayrshire in milk, under 3 years old, 1st premium, $5.

J. D. W. French, North Andover, Ayrshire in milk, under 3 years old, 2d premium, $4.

B. P. Ware, Marblehead, Ayrshire calf 4 months old, 1st premium, $5.

J. D. W. French, North Andover, Ayrshire calf 4 weeks old, 2d premium, $3.

Francis Dane, Hamilton, Jersey heifer, 1st premium, $6.

Henry Saltonstall, Peabody, Jersey heifer, 2d premium, $4.

Charles S. Bradley, West Newbury, Devon heifer, 1st premium, $6.

Charles S. Bradley West Newbury, Devon heifer, 2d premium, $4.

E. T. Northend, Newburyport, Short Horn heifer in milk, 1st premium, $12.

E. T. Northend, Newburyport, Short Horn heifer in milk, 2d premium, $6.

Charles J. Peabody, Topsfield, Grade heifer in milk, 1st premium, $12.

Albert W. Dodge, Hamilton, Grade heifer, 1st prem., $6.

Volney C. Stowe, Salem, Grade heifer, 2d premium, $4.

*Committee*—A. C. Estes, T. K. Allen, Charles Perley, Alvin Smith.

STATEMENT OF J. D. W. FRENCH.

To the Committee on Heifers:

I enter my heifer, "Dolly 3d," for the premium for the best Ayrshire, under 4 years, in milk. "Dolly 3d" was calved June 10th, 1871. Dam "Dolly," 342; sire "Brewster," 102. She dropped her first calf October 9th, 1873, and is due to calve again October 25th, 1874.

For the premiums for heifers, 1 year old and upwards, that have never calved, I enter the following Ayrshires:

1. "Rose McDonald,"—calved September 26th, 1872—

2 years old. Sire Fitz James, 550; Dam Nellie McDonald 2d, 658.

2. "Rhoda,"—calved January 12th, 1873,—1 year old Sire Fitz James, 550; Dam Roxanna, 1816.

3. "Primala,"—calved May 18th, 1873,—1 year old. Sire Fitz James, 550; Dam Primrose, 711.

4. "Jennie Gray,"—calved September 26th, 1873,—1 year old. Sire Fitz James, 550; Dam Jennie Gray, 477.

5. "Tea Rose,"—calved July 18th, 1872. Sire Fitz James, 550; Dam Rose, 743.

CALVES.

I also enter the Ayrshire heifer calf, "Jennie Gray 4th,"—calved August 31st,—Sire Fitz James, 550; Dam Jennie Gray, 477—for the premium for best heifer calf, thoroughbred.

STATEMENT OF BENJ. P. WARE.

MARBLEHEAD, Sept. 29, 1874.

I offer for premium my thoroughbred Ayrshire calf, Miss Mavis 5th, born May 30, 1874. Her dam was Miss Mavis 3d, grand dam was Miss Mavis, imported by Sanford Howard, Esq., for the Massachusetts Society for the Promotion of Agriculture. Sire, General Red and White, born August 1, 1861, bred by Dr. George B. Loring, his sire, Cabott, 111, dam, Jessie, 107. This calf never sucked. Fed with mother's milk for two weeks, then tied out to grass, and fed with skimmed milk twice per day since.

STATEMENT OF FRANCIS DANE.

HAMILTON, Sept. 28, 1874.

TO COMMITTEE ON HEIFERS:

*Gentlemen*:—I enter for premium two Jersey Heifers—"Blanche" and "Nora."

"Blanche" dropped February 14, 1873. Dam Jennie 2d, Sire Prince Albert.

"Nora" dropped November 13, 1873. Dam Minnie 2d, Sire Prince Albert.

"For further pedigree, see Herd Register for 1871."

STATEMENT OF HENRY SALTONSTALL.

ROCKWOOD, WEST PEABODY,
September 29, 1874.

CHARLES P. PRESTON, ESQ., Secretary Essex Agricultural Society;

*Sir:*—I enter for premium in the class of "Thoroughbred Jersey Heifers, one year old and upwards, that have never calved," my thoroughbred Jersey Heifer "Sunshine 2d," 2 years old September 17, No. 2846 in the American Jersey Cattle Club Herd Register, and due to calve February 25, 1875, by my thoroughbred Jersey Bull "Champion," No. 1109.

This heifer is by my imported Bull "Jack Horner," from my Cow "Sunshine," No. 944; she from my imported "Diamond," No. 570, by the imported (Prize Bull of the Island of Jersey) "John Le Bas," No. 318. Sunshine died from milk fever at the birth of her second calf (Shadow), but 12 months from the day she dropped her first calf (Sunshine 2d) she gave 7 quarts of milk, yielding 23 1-2 per cent. of cream.

This heifer is the picture of her dam, and from her marks and ancestry should be as good a cow.

I also enter for premium in the class of "Thoroughbred Jersey Calves, under one year old," my calf "Shadow," 10 months old September 3d, from "Sunshine," No. 944, above mentioned, by my imported Jersey Bull "Jack Horner." Shadow is entered as No. 3528 in the Herd Register of the American Jersey Cattle Club.

I also enter for premium in the class of "Grade Heifers, one year old and upwards, that have never calved," my High Grade Jersey Heifer "Sibyl 2d," 29-32 Jersey, 3-32 Ayr-

shire, 15 months old September 7, by my imported Bull "Jack Horner," from my Cow "Sibyl," whose record, detailed in my report to the Committee on Milch Cows, shows a yield from June 15 to September 3, 1874, when 15 years old, of 18 quarts a day; and for the year from April 7, 1868, to April 7, 1869, of 13,065 pounds, (or 6 1-2 tons,) an average of 17 quarts of milk a day for the whole year.

Sibyl 2d is due to calve May 31, 1875, by my thoroughbred Jersey Bull, "Champion."

STATEMENT OF C. J. PEABODY.

To the Committee on Heifers:

*Gentlemen*:—I enter for premium my Heifer "Blossy." She was three years old in May last, is Grade Ayrshire, was raised by me from a Native cow of great milking qualities, and sired by an Ayrshire bull. She dropped her first calf in June, 1873; calved again May 20, 1874; will next calve April 12, 1875. Her keeping has been good pasture through the season from the time of calving till June 20, one quart of meal per day; after August 15, one feed of corn fodder per day, and since September 1st, one feed of potatoes daily in addition.

Quantity of milk per day for the first ten days of June, and last ten days of August, in pounds, as follows:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| June | 1, | 22 1-2 | pounds. | August | 22, | 19 | pounds. |
| " | 2, | 23 | " | " | 23, | 19 | " |
| " | 3, | 24 | " | " | 24, | 19 | " |
| " | 4, | 24 | " | " | 25, | 18 | " |
| " | 5, | 22 | " | " | 26, | 19 | " |
| " | 6, | 25 | " | " | 27, | 19 | " |
| " | 7, | 25 | " | " | 28, | 19 | " |
| " | 8, | 25 | " | " | 29, | 19 | " |
| " | 9, | 24 | " | " | 30, | 19 | " |
| " | 10, | 26 | " | " | 31, | 19 | " |
| | | 240 | pounds. | | | 189 | pounds. |

I also enter one yearling heifer, "Gipsey." She was one year old the 22d of April last, is half Jersey, if not more; has had no extra keeping whatever.

Topsfield, September 28, 1874.

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## WORKING OXEN.

James M. Perry, Danvers, 1st premium, $15.

Ariel H. Gould, Topsfield, 2d premium, $12.

Dr. Shreve and R. Price, Topsfield, 3d premium, $10.

William G. Horton, Ipswich, best teamster of oxen, the Loring premium, $10.

Wm. B. Carlton, *Chairman*.

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## TOWN TEAMS.

The Committee on Town Teams report that they were much surprised to find that five entries for premium had been made—two ox teams, and three horse teams. Both ox teams were promptly on the ground, but owing probably to the heavy rain, one of the horse teams failed to put in an appearance. The stock in both ox teams was of superior quality, and each team had points of such excellence that the Committee found it very difficult to decide which was on the whole the best.

Exactly the same difficulty was found upon inspection of the horse teams. Had the day been fine, the display of horse and ox teams, in point of quality and numbers would have been probably far the best of any ever witnessed in this County, and hard to be excelled. The Committee think that although but two premiums were offered, each of the four competing teams deserved one, and that it was a mistake for the Society to offer but one premium for each class of Town

Teams. We suppose, however, this oversight arose from the fact that heretofore this number of premiums has not been exceeded by the number of competitors.

The Committee recommend a division of the premiums as follows:

To the Topsfield ox team—18 pairs, $20.

To the North Andover ox team—16 pairs, $10.

To the Danvers horse team, $20.

To the Essex horse team, $10.

*Committee*—Jos. S. Howe, Dudley Bradstreet, Sherman Nelson.

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## STEERS.

The Committee on Steers have attended to that duty, and award the following premiums:

For the best pair of 3 year olds, to J. Kittredge, of North Andover, the 1st premium of $8.

For the best pair of 2 year olds, to Romulus Jaques, of West Newbury, the 1st premium of $6.

To J. Kittredge, of North Andover, the 2d premium of $5.

To G. W. Russell, of Lawrence, for his 1 year old Jerseys, the 2d premium of $4.

*Committee*—Aaron Low, A. T. Newhall, C. K. Ordway, C. J. Peabody, Wm. Howe Burnham.

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## STALLIONS.

The Committee on Stallions have awarded the premiums as follows, viz:

### FIRST CLASS.

G. W. Rogers, Peabody, "Scott," 1st premium, $18.

A. J. Clark, Danvers, "Mambrino Gold Seal," 2d premium, $12.

Thomas Sawyer, Boxford, "Napoleon," 3d premium, $10.

Under this class S. P. Prescott shows a very fine horse. The Committee regret very much that there was not a premium they could award him; would recommend the Society to award a gratuity.

SECOND CLASS.

J. W. Trask, Beverly, 1st premium, $10.

C. S. Clark, Salem, 2d premium, $6.

As there was no Stallion with 5 colts of his get, the Committee could not award the $30 premium.

*Committee*—J. A. Savary, S. F. Newman, W. J. Day, Jr.

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## BROOD MARES.

The Committee on Brood Mares have attended to that duty, and submit the following report:

The number of entries was 8. We have awarded premiums as follows:

G. W. Rogers, Peabody, "Empress," 1st premium, $18.

John Gibney, Salem, 2d premium, $12.

George B. Martin, Danvers, 3d premium, $10.

*Committee*—G. W. Boynton, G. W. Russell, W. J. Dale, Jr.

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## FAMILY HORSES.

The Committee on Family Horses would respectfully report:

Owing to the severe storm it was impossible to make the examination they desired, and some of the horses were withdrawn before the Committee could see them. One Roan Pony, presented by Charles Boynton, of Gloucester, although a very nice Pony, was considered too small to come under the

head of Family Horses. Of those presented to the Committee, they award the premiums as follows:

First premium of $18, for Bay Horse entered by Samuel James, of Gloucester.

Second premium of $12, for Bay Mare, "Topsfield Maid," entered by T. W. Peirce, of Topsfield.

Third premium of $10, for Brown Horse, entered by C. C. Cressey, of Gloucester.

*Committee*—S. W. Hopkinson, Eben King, Ambrose Moon.

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## FARM AND DRAFT HORSES.

B. P. Ware, of Marblehead, 1st premium, $15.

Cornelius Gaffney, of Danvers, 2d premium, $12.

Orrin Putnam, of Danvers, 3d premium, $10.

J. F. Dane, of Hamilton, 4th, premium, $6.

E. P. Perley's horses were ruled out on account of being team horses.

The horses of E. F. Knowlton and A. Knowlton were ruled out on account of drawing in double teams.

Your Committee would have been glad to award more premiums had they been allowed to do so, for they were the best lot of horses we ever saw exhibited at a Cattle Show.

*Committee*—Moses A. Shackley, William Thurlow, David Knowlton.

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## PAIRS OF DRAFT HORSES.

Edward H. Brown, of Gloucester, 1st premium, $15.

Herbert A. Knowlton, of Essex, 2d premium, $10.

*Committee*—Bennett Griffin, S. A. Merrill, Robert A. Smith, Amos Poor.

## COLTS—FIRST CLASS.

To "Vermont Boy," 4 years old, 1st premium, $12.

Joseph Tracy, of Salem, do. do., 2d premium, $8.

J. D. W. French, of No. Andover, do. do., 3d premium, $5.

G. W. Rogers, of Peabody, 3 year old, 1st premium, $10.

John Gibney, of Salem, 2d premium, $5.

J. D. W. French, of North Andover, 3d premium, $3.

Samuel C. Oliver, *Chairman*.

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## COLTS—SECOND CLASS.

C. F. Pendergast, of Salisbury, 2 year old, 1st premium, $8.

S. P. Prescott, of Haverhill, do. do., 2d premium, $3.

Emerson Whipple, of Hamilton, yearling, 1st premium, $8.

A. Titcomb, of Rowley, do., 2d premium, $3.

*Committee*—J. Bradstreet, A. Rea, T. Southwick.

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## SWINE.

J. D. W. French, of North Andover, for Essex Boar, 1st premium, $10.

Robert G. Buxton, of Peabody, for Boar, 2d premium, $6.

Joseph Kittredge, of North Andover, Breeding Sow, 1st premium, $10.

W. J. Dale, Jr., of North Andover, Breeding Sow, 2d premium, $6.

Daniel Carlton, of North Andover, Weaned Pigs, 1st premium, $6.

Geo. W. Rogers, of Peabody, Weaned Pigs, 2d premium, $4.

*Committee*—D. G. Todd, C. C. Blunt, Ira S. Woodman, Frank Marsh.

STATEMENT OF J. D. W. FRENCH.

To the Committee on Swine:

For the premium for the best Boar, I enter my Essex Boar "Cardiff 2d," farrowed April 19th, 1873. His sire "Cardiff," at the age of 9 months, took 2d prize at the Royal Agricultural Show, England; also won 1st prize at N. Y. State Fair in 1872. His dam is descended from Samuel Thorne's stock of Essex Swine.

For the premium for best Sow, I enter my Essex Sows "Topsy 2d," 2 years old, dam "Topsy" by "Andover," bred by me—and "Zapata," 1 year old, dam "Lady Bess" by "Turk," both bred by Harris, N. Y.

Although under 4 months old, I have entered a litter of 4 Essex Weaned Pigs, farrowed July 25th. Dam "Topsy 2d" by "Cardiff 2d."

STATEMENT OF ROBERT G. BUXTON.

To the Committee on Swine:

*Gentlemen:*—I offer for premium my pure bred French Boar, from the importation of John B. Clarke, Esq., Manchester, N. H. He is 9 months old. Also my Yorkshire Sow, with her seven pigs 15 days old. The Sow is 18 months old. These pigs have been fed but twice a day during the summer, upon common swill from the house, with but very little grain in addition.

STATEMENT OF JOSEPH KITTREDGE.

To the Committee on Swine:

I enter for premium, 2 Breeding Sows and 1 Boar, all of the Jacques breed. The Sows are 18 months old, have had two litters of pigs each,—one litter in March, 1874, the

other in August, 1874. Their food has been house waste and scraps, without grain.

The Boar is 6 months old; is a pig of one of the Breeding Sows offered herewith. His sire is Pure Chester White.

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## SHEEP.

Daniel Carlton, of North Andover, Buck, 1st premium, $8.
Francis Dane, of Hamilton, Flock, 1st premium, $10.
Francis Dane, of Hamilton, Lambs, 1st premium, $4.

*Committee*—F. H. Appleton, Nathan F. Abbott, Geo. E. F. Dane, Enoch Merrill, Chas. Corliss.

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## POULTRY—FIRST CLASS.

| | | | | | | |
|---|---|---|---|---|---|---|
| W. M. Ward, | Peabody, | Light Brahma | fowls, | 1st | prem., | $3 |
| Sam'l Newman, | do | do | do | 2d | do | 2 |
| H. C. Fegan, | Groveland, | do | chicks, | 1st | do | 3 |
| do | do | do | do | 2d | do | 2 |
| W. M. Ward, | Peabody, | Dark | fowls, | 1st | do | 3 |
| G. D. Walton, | do | do | do | 2d | do | 2 |
| W. M. Ward, | do | do | chicks, | 1st | do | 3 |
| do | do | do | do | 2d | do | 2 |
| Charles W. Hatch, | Danvers, | P. Cochin | fowls, | 1st | do | 3 |
| G. D. Walton, | Peabody, | do | do | 2d | do | 2 |
| J. H. Poole, | do | do | chicks, | 1st | do | 3 |
| G. C. Rogers, | do | do | do | 2d | do | 2 |
| G. D. Walton, | do | W. Cochin | fowls, | 1st | do | 3 |
| G. C. Rogers, | do | do | chicks, | 1st | do | 3 |
| S. J. Dow, | do | Black | fowls, | 1st | do | 3 |
| G. C. Rogers, | do | do | chicks, | 1st | do | 3 |
| S. J. Dow, | do | do | do | 2d | do | 2 |

C. Bennett, Peabody, Buff Cochin fowls, 1st prem., $3
G. D. Walton, do do do do 2d do 2
C. Bennett, do do do chicks, 1st do 3
do do dd do do do 2d do 2
L. B. Hawkes, Ducks, 1st do 3
B. P. Ware, Marblehead, do 2d do 2
L. B. Hawkes, Geese, 1st do 3
S. Newman, Peabody, do 2d do 2
W. M. Ward, Peabody, for best collection of fowls, Diploma.

*Committee*—Charles P. Barrett, Eben R. Savary, Frank B. Messer.

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## POULTRY—SECOND CLASS.

Brown Leghorn fowls, 1st premium, to S. J. Pettingill, of Salem, $3.

Brown Leghorn, 2d premium, to George D. Walton, of Peabody, $2.

Brown Leghorn chicks, 1st and 2d premiums, to C. E. Bradford, of Peabody, $5.

White Leghorn fowls, 1st premium, to S. J. Pettingill, of Salem, $3.

White Leghorn fowls, 2d premium, to G. D. Walton, of Peabody, $2.

White Leghorn chicks, 1st and 2d premium, to S. J. Pettingill, of Salem, $5.

Plymouth Rocks, 1st premium, to George H. Perkins, of Danvers, $3.

Plymouth Rocks, 2d premium, to C. W. Hatch, of Danversport, $2.

Dominique fowls, 2d premium, to D. Richards, of Danvers, $2.

Silver Hamburgs, 1st and 2d premiums, to W. H. Osgood, $5,

Golden Polands, 1st premium, to Willis Barnard, of Danvers, $3.

Game Bantam fowls, 1st premium, to F. E. Berry, of Peabody, $3.

Game Bantam fowls, 2d premium, to D. B. Wallace, $2.

Game Bantam chicks, 1st premium, to F. E. Berry, of Peabody, $3.

Game Bantam chicks, 2d premium, to D. B. Wallace, $2.

Dorkings, 1st and 2d premiums, to S. Connolly, of Beverly Farms, $5.

Games, 1st premium, to H. N. Sanford, $3.

Games, 2d premium, to D. B. Wallace, $2.

Black Spanish, 1st premium, to E. C. Spofford, of Peabody, $3.

*Committee*—John Swinerton, Jasper Rea, C. A. Beckford, H. M. Goodrich.

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## PLOUGHING—DOUBLE TEAMS.

There were but two entries, and the Committee award the first premium of $12, to Joseph Horton, of Ipswich.

The second premium of $10, to Addison Child, of Swampscott.

The Committee feel the result might have been different had the quality of the land been equal.

*Committee*—Horace Ware, E. Francis Holt, Thomas G. Ordway.

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## PLOUGHING—SINGLE TEAMS.

The Committee regret that there were only two trials of ploughing with single teams, and hope that the ploughing interest will be more completely represented in the future.

They award the first premium of $10, to Richard T. Jaques

of Newbury, and the second premium of $7, to Charles P. Preston of Danvers.

It is an undisputed fact that good ploughing is one of the most essential points of good tillage, and, as such, it deserves the careful attention of the farming community in general.

The fact that there were but two entries of single teams seems to indicate that we are hardly alive to the importance we should attach to single team ploughing. Perhaps more attention has been given to ploughing with double teams, but it seems to us that the single team is generally to be preferred, as there are many that keep but one yoke of cattle.

There are, of course, some cases in which a double team is indispensable, but in the majority of cases the single team will do the work more satisfactorily, and with much less expense. If you wish to plough your land to the depth of twelve or fourteen inches, gauge your plow for six or seven, according to the depth required, and then go twice in the same furrow. Although it requires about twice as long, yet there is a saving of one pair of cattle and a driver and an improvement in the quality of the work. Any defect in the first ploughing will be remedied in the second, and the soil will be more thoroughly mixed up and pulverized by separate ploughing, an advantage which was recognized by the inventor of the subsoil plow.

The subsoil plow, though working much the same way, cannot in practice bring about so perfect a result as can be obtained by the method recommended. That the land should thus be thoroughly ploughed up is an almost invaluable prerequisite, when we are about to set out trees, strawberries, and other plants or shrubs. Take the Michigan plow, for instance; it requires a strong team and is laborious to hold, and will not do the work so satisfactorily as the common plow going twice in a furrow, unless the land is smooth and free from stones.

Perhaps some may think it a difficult matter to make the plow follow in the same furrow, but I can assure them, after much experience with this mode of ploughing, that the plow

will follow better the second time than the first, and go the third time if you want to, and so continue ploughing as deep and thoroughly as we wish. However, I ask none to take my statement of it, but urge all that are interested in the matter to give the method a fair trial and judge for themselves of its expediency.

It seems as if in ploughing we had caught from the spirit of the age a tendency to rush wildly forward, thinking more of a few moments of time than of the thorough and proper performance of our work.

I may say that this is not a fault of the Society as a whole. No inducement whatever is offered for making this exercise a trial of speed, and yet I should think it advisable to go further and impose some restrictions limiting the rate of speed.

As some members of the Society are very much prejudiced against horse trotting at our fairs, but still are silent as regards ploughing in urging the teams to their utmost capacity, it puts me in mind of a passage of Scripture that speaks of a certain class of persons which strain at a gnat and swallow a camel. In a word, then, to obtain the best results in ploughing, I should recommend a good single team, driven at a moderate rate of speed, and to plow deep, except among trees and some soils it may not be best. Persons must use their own judgment.

James Flint, *for the Committee.*

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## PLOUGHING—WITH HORSES.

The Committee appointed by the Society for the purpose of awarding premiums on ploughing with horses, have attended to that duty and beg leave to make the following awards.

Teams entered and presented, nine in number. Your Committee were unanimous in the following awards:

To Sylvester Dane, of Hamilton, the 1st premium of $12.

To Orrin Putnam, of Danvers, the 2d premium of $10.

To Richard S. Bray, of Newbury, the 3d premium of $8.

To Romulus Jaques, of West Newbury, the 4th premium of $6.

To G. W. Russell, of Lawrence, the 5th premium of $4.

Your Committee also are unanimous in awarding to Joseph C. Putnam, of Danvers, the Society's premium of $10, for the best teaming with horses.

*Committee*—James P. King, John Keely, Edward K. Lee, Wm. Goodrich.

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## PLOUGHING—WITH SWIVEL PLOUGH.

The Committee on Ploughing with Swivel Plows, respectfully report that there were four entries for premiums. By careful examination of the ploughs used and the work performed by them, the Committee was made to realize, perhaps more fully than ever before, that the great want of many farmers, especially market gardeners, is not yet fully met: *i. e.*, a swivel or side-hill plough that will work equally well both ways, to turn a furrow nearly, or quite, as well as a common plough, and be of as great durability. This may be asking too much of the plough makers. But farmers want, and continue to hope for such a plough.

Dr. Joseph Kittredge, of North Andover, used F. F. Holbrooks' No. 8 Swivel Plough. It was new, and the mouldboard was rough, having been neither ground nor worn smooth. The plough had not been gauged, or tried at all. It could not be made to run to the depth required by the Society, and it did bad work.

Kittredge & Butterfield, of North Andover, appeared with The Ames Plow Co.'s Side-hill Plough No. 26. This was also new, but bright. It was with difficulty made to plough deep

enough. However, it made fair work, for which the Committee awarded the third premium of $8.

Mr. Wm. Foster, of North Andover, used F. F. Holbrooks' Side-hill Plough No. 7. This plough had been used considerably and there was no difficulty in making it run to the required depth. It did quite fair work, for which the Committee felt justified in giving the second premium of $10.

Mr. A. H. Gould, of Topsfield, used an old side-hill plough, with a much worn point, made by Lufkins, of Concord, N. H., size No. 2. It appeared to have given long and good service; coming much nearer the ideal swivel plough than either of the others on the field. Its work was unusually well done, and the Committee unanimously awarded him the first premium of $12.

In this report on the qualities of the several ploughs and the work done by them, it might seem that the older and more worn the plough is, the better the work done. Although apparently true in this trial, it doesn't necessarily follow that much use improves a plough. But sufficient use to get it thoroughly smooth, and perfectly gauged and adjusted, is necessary in order that it shall do its best work.

In discussing the several ploughs, your Committee would not lose sight of the skill of the ploughmen; for an unskillful ploughman can't do good work with a perfect plough, nor can the most expert plough man do his best work with any except the best plough.

As it is the object of this Society, in offering premiums at its annual ploughing match, to afford the farmers of Essex the opportunity of carefully observing and comparing the merits of the several patterns of ploughs, that they may be able to purchase understandingly, it was gratifying to your Committee to notice how earnestly the farmers improved their school day of the year, the Exhibition of the Essex Agricultural Society. All of which is very respectfully submitted.

*Committee*—Benjamin P. Ware, Cyrus K. Ordway, J. F. Knowlton, Paul D. Patch.

## PLOUGHING—BY BOYS.

SPECIAL PREMIUM.

The Committee on Ploughing by Boys, 18 years or under, award the first premium of $25, to Wm. G. Horton, of Ipswich, who is 17 years of age.

The second premium of $15, to Willie E. Merrill, of West Newbury, aged 18 years.

*Committee*—R. T. Jaques, Eustis Balch.

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## AGRICULTURAL IMPLEMENTS.

Best Farm Wagon, 1st premium $5, to W. B. Peart, of Danvers.

Best Team Harness, 1st premium $5, to Henry Hobbs, of Wenham.

Best Hay Cutter, 1st premium $3, Grant Cutter, to Whittemore Bros.

Best Ox Yoke, 1st premium $3, to Ames Plow Company.

Potato Digger, to S. S. Hickok, of Methuen, $5.

Dole & Osgood, of Peabody, for Horse Shoes, $1.

Best collection of Agricultural Implements, Ames Plow Company, of Boston, 1st premium $15, and diploma.

E. E. Lummus & Co., for their Mowing Machine, $5; for Seed Sower, $2.

Albert W. Howe, of Danvers, for his Root Shovel, $1.

Hale & Co., of Salem, for Seed Sower, $2.

E. E. Lummus & Co., for Hand Cider Mill, $3.

Hale & Co., of Salem, for collection of Implements, $4.

Charles Frizell, of Boston, for his Step Ladder, $1.

*Committee*—D. H. Stickney, Jos. O. Procter, John Keely, Wm. B. Carleton.

## CARRIAGES.

The Committee on Carriages respectfully submit the following report:

The first premium of $15, is awarded to William Gunnison & Co., of South Amesbury, for best Top Buggy.

Wm. B. Peart, of Danvers, best Express Wagon, $10.

H. H. Pillsbury, of Danvers, for the best display of Carriages, $5.

Dole & Osgood, of Peabody, for best Open Buggy, &c., diploma.

*Committee*—Aaron Sawyer, David Stiles, Samuel W. Spalding, T. R. Leach.

## DAIRY.

First premium, A. F. Hobbs, Wenham, $10.

Second premium, Mrs. Farnham Stiles, Middleton, $8.

Third premium, G. W. Russell, North Andover, $6.

Fourth premium, Mrs. P. T. Winkley, Newburyport, $4.

H. G. Herrick, *Chairman*.

## BREAD AND HONEY.

The Committee on Bread and Honey submit the following report:

| | | |
|---|---|---|
| Mrs. Charles E. Smith, Danversport, | gratuity, | $2 00 |
| " D. P. Parker, Groveland, | " | 1 50 |
| " S. G. Sargent, Methuen, | " | 1 50 |
| " M. H. Patch, Hamilton, | " | 1 50 |
| " Chas. Tapley, Danvers, | " | 1 50 |
| Miss R. F. Carleton, No. Andover, | " | 1 50 |
| Mrs. C. H. Goulding, Peabody, | " | 1 50 |
| " C. H. Joye, Danversport, | " | 1 00 |

| | | |
|---|---|---|
| Miss C. A. Perley, Danvers, | gratuity. | $1 00 |
| " Mary Shea, | " | 1 00 |
| " Anna Perley, | " | 1 00 |
| Mrs. E. T. Waldron, | " | 50 |
| Messrs. Hale & Davis, Peabody, | " | 2 00 |

HONEY.

| | | |
|---|---|---|
| H. Alley, Wenham, 28 boxes, | gratuity. | $2 00 |
| D. F. Savage, Danvers, 2 hives, | " | 1 00 |
| F. G. P. Killam, Manchester, 2 boxes, | " | 50 |

*Committee*—Charles Ingalls, J. B. Swett, Mrs. C. P. Preston, Mrs. John Todd.

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## PEARS.

For the best 12 specimens of the following varieties $3 each:

Bartlett, John Hobbs, Ipswich; Belle Lucrative, James Lowrie, Danvers; Beurre Bosc, B. F. Stanley, Newburyport; Beurre Clairgeau, Peter Wait, Danvers; Beurre d' Anjou, Mrs. Frank Upton, Danvers; Beurre Superfin, George W. Taylor, Peabody; Buffum, B. F. Stanley, Newburyport; Duchesse, A. H. Gould, Topsfield; Doyenne Boussock, B. F. Stanley, Newburyport; Golden Beurre, Jos. W. Ropes, Danvers; Howell, Peter Wait, Danvers; Lawrence, B. P. Ware, Marblehead; Louise Bonne, L. D. Pettingill, Salem; McLaughlin, G. W. Taylor, Peabody; Maria Louise, Peter Wait, Danvers; Onondaga, L. D. Pettingill, Salem; Paradise d' Automne, Peter Wait, Danvers; Seckel, C. R. Ordway, West Newbury; St. Michael Archange, G. W. Taylor, Peabody; Sheldon, E. C. Peabody, Groveland; Urbaniste, B. P. Ware, Marblehead; Vicar, Peter Wait, Danvers; Winter Nelis, A. J. Hubbard, Peabody.

For the best collection of 20 varieties, Peter Wait, Danvers, $8.

For the best collection of 15 varieties, A. J. Hubbard, Peabody, $6.

For the best collection of 10 varieties, B. F. Stanley, Newburyport, $4.

For the best dish of Pears (12 specimens) T. C. Thurlow, West Newbury, $6.

Other varieties at $1.50. Noweau Porter, A. Very, Danvers; Andrews, B. P. Ware, Marblehead.

GRATUITIES.

| | |
|---|---|
| D. H. Stickney, Groveland, | $1 00 |
| Josiah Newhall, Lynnfield, | 1 00 |
| E. A. Perry, Danvers, | 1 00 |
| G. W. Gage, Methuen, | 1 00 |
| A. H. Gould, Topsfield, | 1 00 |
| Sumner Southwick, Peabody, | 2 00 |
| D. W. Low, Gloucester. | 1 00 |
| J. Henry Hill, Amesbury, | 50 |
| E. W. Green, North Andover. | 50 |
| Jos. Danforth, Danvers, | 50 |
| Wm. E. Killam, Boxford, | 50 |
| Porter Le Gro, Danvers, | 50 |
| Thos. E. Green, do (Endicott tree, 240 years old,) | 50 |
| Geo. H. Taylor, Peabody, | 50 |
| C. H. Buxton, Salem, | 50 |
| Wm. Huff, Newburyport, | 50 |
| E. F. Webster, Haverhill, | 1 00 |
| S. R. Bott, Peabody, | 50 |
| Chas. J. Peabody, Topsfield, | 50 |
| E. D. Hines, Danvers, | 50 |
| C. C. Farwell, Peabody, | 1 00 |
| D. B. Harker, Groveland, | 50 |
| Geo. D. Glover, Salem, | 50 |
| S. A. Merrill, Danvers, | 50 |
| L. P. Whipple, Lynn, | 1 00 |
| E. Bradstreet, Danvers, | 50 |

Aaron Low, Essex, - - - - - - $1 00
D. G. Todd, Rowley, - - - - - 50
Farnham Stiles, Middleton, - - - - - 50
Stephen Cook, Wenham, - - - - - 50
Augustus Very, Danvers, - - - - - 50
C. P. Bomer, Peabody, - - - - - 50

*Committee*—Andrew Nichols, Thomas C. Thurlow, G. W. Gage, D. W. Lowe.

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## APPLES.

The Committee on Apples awarded as follows:

Best 12 specimens of Baldwins, ot W. B. Woodman; Danvers Winter Sweet, E. G. Hyde; Drap d' Or. B. P. Ware; Hubbardston Nonsuch, Samuel A. Merrill; Hurlburt, James Flint; Killham Hill, W. B. Richardson; Ladies' Sweeting, Henry Very; Pickman Pippin, B. P. Ware; Roxbury Russett, Aaron Low; Rhode Island Greening, F. W. Lyford; Seaver's Sweet, Frederic How; Sweet Baldwin, B. P. Ware; Williams' Favorite, Joseph Danforth; Porter, Peter Wait.

Best 20 varieties, James Flint; 15 do., Peter Wait; 10 do., E. G. Hyde.

Best 24 specimens, Capt. J. Hobbs.

Best Crab Apples, Peter Wait.

For fine collection of Apples, T. C. Thurlow, W. Newbury, $4.
" " " Aaron Low, of Essex, 4.
" " " G. W. Gage, of Methuen, 1.
For fine collection superior R. I. Greenings, 1 dish, W. A. Dane, Hamilton, 1.
For fine collection of Gravenstein, J. H. Hill, Amesbury, 1.
" Drap d' Or, Mrs. A. P. Swinerton, of Danvers, 1.
" " " Otis Nichols, Lynn, 1.
" Porter, Augustus Very, of Danvers, 1.

For best 24 specimens of Crab Apples, Peter Wait, Danvers, $1.50.

J. J. H. Gregory, *Chairman.*

## PEACHES, GRAPES AND ASSORTED FRUIT.

### PEACHES.

Best Freestone White Flesh Peaches, Joshua Silvester, Danvers, - - - - - - - - $2 00
Best Yellow Flesh, Thomas Capers, Newburyport, - 2 00
Best Seedling, D H. Stickney, Groveland, - - 2 00
Best collection Peaches, Thos. Capers, Newburyport, - 3 00
Porter Le Gro, Danvers, gratuity, - - - - 50
Etta Eaton, " " - - - - 50
E. F. Webster, Haverhill " - - - - 50
G. W. Gage, Methuen, " - - - - 1 00

### GRAPES.

Best 4 bunches Concord, G. W. Gage, Methuen, - $3 00
" 4 " Hartford Prolific, J. W. Ropes, Danvers, 3 00
" 4 " Isabella, Ichabod Sawyer, " 3 00
" 4 " Delaware, J. Lowrie, " 3 00
John L. Smart, Danvers, Delaware, gratuity, - - 1 00
Best 4 bunches Creveling, Jos. W. Ropes, Danvers, - 3 00
" 4 " Clinton, G. W. Gage, Methuen, - 3 00
" 4 " Israella, Franklin Upton, Danvers, - 3 00
" 4 " Massasoit, Jos. W. Ropes, Danvers, - 3 00
" 4 " No. 4, or Wilder, G. W. Gage, Methuen, - - - - - - - - 3 00
Best 4 bunches No. 19, or Merrimac, John L. Smart, Danvers, - - - - - - - - 3 00
Best 4 bunches No. 15, or Agawam, J. Q. A. Bachtelder, Danvers, - - - - - - - 3 00
Best collection Cold House, George W. Rogers, Peabody, - - - - - - - - - 6 00
Best collection 10 varieties, not less than 10 pounds, Franklin Upton, Danvers, - - - - - 7 00
Best Lady Mallard, Mrs. L. Mallard, Lawrence, gratuity, - - - - - - - - - 1 00
Best Stickney Seedling, D. H. Stickney, Groveland, - 1 00
Charles Tapley, Danvers, gratuity, - - - - 1 00

Aaron Low, Essex, Cold House, gratuity, - - $1 00
Peter Wait, Danvers, Israella, " - - - 1 00
Farnham Stiles, Middleton, " - - - 1 00
Best Basket Assorted Fruit, Aaron Low, Essex, - 4 00
2d " " " Peter Wait, Danvers, - 3 00
H. B. Learned, Danvers, Plums, gratuity, - - 50

D. H. Stickney, *Chairman.*

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## NEW WINTER APPLE.

As Chairman of the Committee on New Winter Apples, I will state that some apples were exhibited, which were claimed to be Seedlings, equal to or better than the Baldwin or Roxbury Russet. The apple at present is very high toned, hard flesh and tough skin; but Mr. Conant, of Ipswich, the exhibitor, states that as the apple ripens it becomes pleasant, sprightly and tender, keeping well until May, retaining all its good qualities. As none of the Committee but myself were there, no decision was made.

I will say that my opinion is favorable towards the apple, and would recommend that it be thoroughly examined another year,

Peter Wait, *for the Committee.*

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## FLOWERS.

The Committee present the following report:

Best pair Parlor Bouquets, to Thomas Capers, Newburyport, - - - - - - - - $3 00
Best pair Hand Bouquets, to J. C. Higgins, Newburyport, - - - - - - - - - 2 00
Best Floral Design, to Mrs. C. H. Buxton, Salem, - 2 00
Best dish Cut Flowers, to J. C. Higgins, Newburyport, 2 00

| | | |
|---|---|---|
| Best twelve Dahlias, to Thomas Capers, Newburyport, | | $1 00 |
| Best display of Pansies, to Otis Nichols, Lynn, | - | 1 00 |
| Best twelve Verbanas, to J. C. Higgins, Newburyport, | | 1 00 |
| Best display of Native Flowers, to Mrs. H. M. Colcord, Peabody, | - - - - - - - | 1 00 |
| Largest and best display from one individual, to J. J. H. Gregory, Marblehead, | - - - - - | 4 00 |
| S. P. Fowler, Danvers, for specimens of Three Petal Magnolias, Cucumber Tree and Bobartia, gratuity, | | 1 00 |
| Miss F. M. Porter, for two cases of Ferns, | " | 1 00 |
| D. W. Low, Gloucester, for baskets Dalhias and Zinnias, | - - - - - - gratuity, | 1 00 |
| Mrs. C. H. Perry, Danvers, | - - - " | 1 00 |
| " Henry Learnard, " | - - - " | 50 |
| Miss Julia England, " | - - - " | 50 |
| Mrs. Prime, Rowley, | - - - - " | 50 |
| Miss Caroline Lawrence, Danvers, | - - " | 50 |
| " Jessie Learoyd, | " - - " | 50 |
| " Etta Ropes, | " - - " | 50 |
| Mrs. D. J. Preston, | " - - " | 50 |
| Miss Mary D. Stimson, | " - - " | 50 |
| Mrs. H. L. Eaton, | " - - " | 50 |
| Mrs. Waldron, | " - - " | 50 |
| Miss Anna M. Grover, | " - - " | 50 |
| " Mary Mudge, | " - - " | 50 |
| Mrs. D. B. Prime, Rowley, | - - - " | 50 |
| " Joshua Sylvester, Danvers, | - - " | 50 |
| Albert Titcomb, Rowley, | - - - " | 50 |
| Miss Sarah Adams, Danvers, | - - - " | 50 |
| " Ruth Fowler, " | - - - " | 50 |
| H. E. Pedrick, " | for Pot Plant, " | 50 |
| Mrs. J. A. Blake, " | " " " | 50 |
| Miss Etta Learoyd, " | wild flowers, " | 50 |
| Mrs. John A. Hoyt, Georgetown, | pair bouquets, " | 50 |
| " McGill, " | - - - - " | 50 |
| John H. Sears, Danvers, | for wild flowers, - " | 50 |

The Committee have, as usual, been obliged to overrun the meagre amount allowed them wherewith to reward those lovers of flowers, who have so lavishly brought in their treasures to decorate the Exhibition Hall. That a fine display of Flowers renders the Exhibition *doubly* attractive, none will dispute; and it is a matter of regret to the Committee, that each year hosts of finely arranged bouquets, and carefully prepared ferns and mosses, have to be passed by, seemingly unnoticed, for the want of a few more dollars to award; and so we deem it expedient to ask for a larger allowance of money in this department; not wholly for gratuities, but in special premiums. Your Committee to-day unanimously voted, that there should be two good premiums offered for first and second collections of Ferns, Gladiolas, Asters and Lilies, and an addition made to the premium now offered for the best collection of Native Plants. Any one who tries gathering a large variety of wild flowers will feel that one dollar is a poor compensation for the hours spent in gathering these wayside treasures; and yet who does not marvel at the delicate beauty, the wondrous variety of these wild beauties that blossom alike for all God's children? If appropriations cannot be made for new plants, as they are perfected by the florist and brought to our notice, why may not some of the old varieties, like the Dahlias for instance, be set aside for a while, that people may be made acquainted with rarer pets of the florist? Hoping these suggestions will meet your approval, and so not pass unheeded. we are very respectfully yours,

Mrs. N. E. Ladd, *for the Committee.*

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## VEGETABLES.

The Committee on Vegetables award premiums as follows:

### ONIONS.

Best Danvers, D. W. Putnam, Peabody, $3.
Yellow Flat, S. A. Merrill, Danvers, $3.

Red, J. J. H. Gregory, Marblehead, $3.

BEETS.

Early Turnip Blood, S. A. Merrill, Danvers, $3.

Long Smooth Blood, none on exhibition. J. J. H. Gregory, for largest and best variety, $3.

CARROTS.

Best Short-top Long Orange, George W. Russell, North Andover, $3.

Short Horn Orange, to George W. Rogers, Peabody, $3.

MANGEL WURZELS.

Best six specimens, J. H. Cheever, Manchester, $3.

FLAT TURNIPS.

Best Purple Top, twelve specimens, E. M. Twiss, West Peabody, $3.

RUTA-BAGAS.

Twelve specimens Best Yellow, Jacob P. Goodale, West Peabody, $3.

Twelve specimens Best White, George W. Parsons, Wenham, $3.

PARSNIPS.

Twelve specimens Best, Charles C. Blunt, Andover, $3.

POTATOES.

Best Early Rose, J. W. Cheever, Manchester, $3.

Best Peerless, J. J. H. Gregory, Marblehead, $3.

CABBAGES.

Best Savoy, S. A. Merrill, Danvers, $3.

Second best, Horatio Perry, Danvers, $2.

Best Fotler's Brunswick, M. F. Batchelder, Peabody, $3.

Second best, C. R. Anderson, Peabody, $2.

Best Stone Mason, S. A. Merrill, Danvers, $3.

Second best, J. J. H. Gregory, Marblehead, $2.

Best Mammoth Drumhead, S. A. Merrill, Danvers, $3.
Second best, George W. Rogers, Peabody, $2.

CAULIFLOWERS.

Best, C. R. Anderson, West Boxford, $3.
Second best, E. C. Larrabee, Salem, $2.

CELERY.

George W. Rogers, Peabody, $2.

FIELD CORN.

Andrew Curtis, Peabody, $3.
Sweet Corn, best early, Andrew Curtis, Peabody, $3.
Best late, S. A. Merrill, Danvers, $3.

SQUASHES.

Best Marrow, J. P. Goodale, $3.
Best Turban, James P. King, $3.
Best Hubbard, S. A. Merrill, $3.
Best Marblehead, George W. Rogers, $3.

MELONS.

Best Green Flesh, S. A Merrill, $2.
Best Musk, S. A. Merrill, $2.
Best Water, J. J. H. Gregory, $2.

TOMATOES.

Best Round Flat, Aaron Low, $3.
Best Spherical, S. A. Merrill, $3.
Best Trophy, Thomas Capers, $3.
Greatest variety, J. J. H. Gregory, $3.

CRANBERRIES.

Best peck, Charles C. Blunt, $3.
Second best, H. A. Stiles, $2.
Third best, W K. Cole, West Boxford, $1.
Best collection of Field and Garden Seeds, J. J. H. Gregory, Marblehead, $8.
Second best, Aaron Low, Essex, $5.

Special Premium, offered by F. H. Appleton, for collection of vegetables raised by one person in Essex County:

First, J. J. H. Gregory, $15; second, S. A. Merrill, $10.

GRATUITIES.

To Geo. W. Rogers, for twelve specimens of Egg Plant, $3.

To E. W. Greene, for collection of Potatoes, $2.

To Andrew Curtis, for ten Crooked Neck Squashes, $1.

To M. F. Blake, for string of Onions, $2.

To Fred S. C. Herrick, for Long Orange Carrots, $1.

The Committee learn with regret that for want of sufficient room to exhibit our contributions, Mr. Frank Alley, of Marblehead, felt compelled to send home without unpacking, a large collection of vegetables, which we had no opportunity to examine.

Y. G. Hurd, *for the Committee.*

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## DOMESTIC MANUFACTURES.

COUNTERPANES, CARPETINGS AND RUGS.

The Committee on Domestic Manufactures have attended to their duty, and respectfully report as follows:

To Mrs. J. Q. A. Bachelder, of Danvers, 1st premium on Counterpane, $4.

To Mrs. —— Carpenter, of Salem, 2d premium on Counterpane, $2.

To Mrs. M. E. Fuller, of Middleton, 1st premium on Rug, $3.

To Miss Lizzie Baxter, of Peabody, 2d premium on Rug, $2.

Gratuities were awarded to the following individuals, viz:

| | |
|---|---|
| To Miss Augusta Palmer, of Boxford, Rug, . . | $1 00 |
| To Miss Henrietta Pushee, of Beverly, " . . | 50 |
| To Miss Abbie Pettingill, of Danvers, " . . | 1 00 |

To Mrs. J. Q. A. Bachelder, of Danvers, Towels, . $1 00
To Mrs. A. D. Swinerton, " Rug, . 50
To Mrs. J. Cheeney, of Middleton, " . . 1 00
To Mary Stuart, Salem, " . . 1 00
To M. E. Stiles, Middleton, " . . 50
To Mrs. Mary Johnson, Danvers, Counterpane, . 1 00
To Mrs. Annie M. Grover, " " . . 1 00
To Mrs. J. H. Smith, Salem, " . . 1 00
To Mrs. Mary Peabody, Middleton, " . . 50
To Mrs. N. E. Stanley, Wenham, " . . 1 00
To Mrs. Nathaniel Ham, Beverly, Rugs, . . . 1 00
To Mrs. M. F. Tufts, Peabody, " . . . 1 00
To Mrs. O. E. Sheldon, Salem, " . . . 50
To Mrs. Mary Davis, Topsfield, " . . . 50
To Mrs. S. C. Pitcher, Danvers, " . . . 50
To Miss Augusta Dodge, " " . . . 50
To Mrs. Putnam Fuller, " " . . . 1 00
To Mrs. Mary A. Wilkins, Marblehead, Rug, . . 50
To Mrs. Horace Ware, Salem, " . . 1 00
To Mrs. Betsy McLoud, Danvers, " . . 50
To Mrs. Augusta Bickford, Danvers, Counterpane, . . 50
To Mrs. S. F. Kimball, " " . 50
To Mrs. Peter E. Smith, Bradford, " . 1 00
To Mrs. Lydia Noyes, Danvers, " . 50
To Miss Emma J. Moses, " " . 1 00
To Mrs. Charlotte A. Atwood, Middleton, Rug, . 1 00
To Mrs. Moses Dow, Lynn, " . . 1 00
To Mrs. A. C. Merrill, Newburyport, Counterpane, . 1 00

There were many articles worthy of mention in this department, but the funds would not allow gratuities to all contributors.

*Committee*—Wm. D. Lamb, chairman; Mrs. G. A. Tapley, Mrs. L. H. Bowdoin, Mrs. Bennett Griffin.

## ARTICLES MANUFACTURED FROM LEATHER.

The Committee appointed upon Articles Manufactured from Leather have attended to their duty, and award the following gratuities:

One rubber covered, gold lined Buggy Harness, by Henry S. McCollough, Gloucester, $1.

One pair of Shoes and five pairs of Boots, by Jos. Morrison, Peabody, $5.

Two Calf Skins, by T. G. Bazin, Danvers, tanned and currried with hair on, were fine specimens, $3.

Cork Bottom Boot, by W. H. Buttrick, Methuen, $2.

One silver mounted Express Harness, by G. T. Hawes, Beverly, $3.

One rubber, gold lined Buggy Harness, by G. T. Hawes, Beverly, $2.

Two pairs of Fishing Boots, by D. N. Prime & Sons, Rowley, $3.

*Committee*—Edward W. Jacobs, Milton G. Tenney, Edwin Mudge, Zachariah Cole.

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## MANUFACTURES AND GENERAL MERCHANDISE.

| | | |
|---|---|---|
| John F. Roberts, Danvers, Book Case, | gratuity, | $1 00 |
| J. H. Prentiss, " Bracket, | " | 50 |
| Beverly Pottery, Beverly, 35 articles Pottery, | grat., | 3 00 |
| Beverly Steam Engine Co., Beverly, miniature Steam Engine, | gratuity, | 2 00 |
| William J. Grant, Flower Stand, | " | 2 00 |
| Dole & Osgood, Peabody, Horse Shoes, | " | 1 00 |
| J. L. Stowe, Salem, " " | " | 50 |
| R. B. Fiske, Groveland, Carpet Sweeper, | " | 1 00 |
| H. M. Bradstreet, Danvers, case Neck Ties, | " | 1 00 |
| Dr. C. Houghton, " " Artificial Teeth | " | 2 00 |

Essex Glue Co., Peabody, Glue, (samples,) gratuity. $1 00
Mrs. H. J. Gale, Haverhill, culinary steamer, " 1 00

*Committee*—Stephen Osgood, Allen Rogers, N. E. Ladd.

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## FANCY WORK.

The Committee on Fancy Work report as follows:

For the best specimen of work performed by a child under 12 years of age, Clara P. Hale, Danvers, 10 years of age, sofa cushion, $5.

### GRATUITIES.

| | |
|---|---|
| Mrs. Augustus H. Perry Salem, 2 handkerchiefs. | $1 00 |
| Miss Etta W. Le Vatte, Danvers, lamp mat, | 50 |
| Miss Ida M. Tibbetts, Danvers, (wax) ice cream set. | 75 |
| Miss Lydia A. Gilbert, Newburyport, (wax) harp. | 75 |
| Annie G. Allen, Danvers, tidy, | 50 |
| Augusta Allen, Danvers, embroidery, | 1 00 |
| Annie S. Porter, (9 years) Danvers, toilet set, | 75 |
| Sarah S. Porter, Danvers, tidy, | 50 |
| George Stimpson, Danvers, motto, | 50 |
| Amelia J. Mudge, Danvers, tidy, | 50 |
| Lizzie W. Tapley, Danvers, tidy, | 75 |
| Ella T. Porter, Danvers, chair seat. | 1 00 |
| Frank E. Lord, Danvers, tidy, | 50 |
| Miss M. J. Robbins, Danvers, book mark. | 75 |
| Miss P. J. Mudge, Danvers, sofa cushion. | 50 |
| Miss Eliza Trask, Danvers, skirt, | 1 00 |
| Mrs. E. W. Jacobs, Peabody, painting, (landscape) | 3 00 |

| | |
|---|---|
| Mrs. E. W. Jacobs, Peabody, painting "Mary and her Little Lamb," | 2 00 |
| Mrs. E. G. Berry, Danvers, (No. 93) picture, | 2 00 |
| Mrs. L, D. Batchelder, Danvers, embroidery, | 50 |
| Mrs. C. D. Richards, Danvers, embroidery, | 1 00 |
| Mrs. Porter Legro, Danvers, hair work, | 1 00 |
| Mrs. L. N. Putnam, Danvers, worsted cushion, | 50 |
| Frank Warren Bly, Danvers, cushion, | 50 |
| Capt. Grant Young, Danvers, knife work, | 1 00 |
| Miss Cora Buckley, Danvers, 11 years old, cushion, | 50 |
| Mrs. E. P. Nichols, Danvers, pair shirts, | 50 |
| Mrs. H. C. Hills, Groveland, (73 yrs. old) embroidery, | 2 00 |
| Mrs. Maria J. Crosby, Georgetown, embroidery, | 1 50 |
| Ellen T. Dubois, Danvers, 2 cases insects, | 1 50 |
| Mrs. Grant Young, Danvers, cushion, | 50 |
| Mrs. Grant Young, Danvers, moss basket, | 50 |
| Miss E. F. Wilson, Peabody, (No. 112) picture, | 1 50 |
| S. S. Learoyd, Danvers, pillow shams, | 1 50 |
| Etta Learoyd, Danvers, oil painting, | 1 50 |
| Miss Julia M. Smith, Danvers, infants' socks, | 50 |
| Mrs. T. H. Abbott, Danvers, driving mittens, | 50 |
| Miss Alice E. Kelley, Danvers, feather wreath, | 50 |
| Nellie A Gould, Topsfield, sofa cushion, | 50 |
| I. M. Berry, Peabody, air castle, | 50 |
| Ella C. Derby, Salem, wax work, | 50 |
| Bella A. Waldron, Peabody, wax flowers, | 50 |
| N. P. Merriam, Danvers, case shirts, | 1 00 |
| Mrs. Horace C. Ware, Salem, hair work, | 75 |
| Mrs. John Mason, wreath, | 1 00 |
| Emily W. Allard, Danvers, patch work, | 50 |
| Mrs. S. C. Pitcher, Danvers, afghan, | 2 00 |
| Miss Augusta Dodge, Danvers, 2 ottomans, | 2 00 |
| Mrs. H. H. King, (75 years old) wax wreath, | 1 50 |
| Mrs. Hannah Kimball, Ipswich, (87 years of age) lace, | 1 50 |

*Committee*—Mrs. S. J. Wight, Miss Lucy M. Paine, Miss Georgia Seaverns.

## CORN CROP.

Your Committee on Grain Crops submits the following report:

The applicants for premium were two,—Mr. Oliver P. Killam, of West Boxford, and Mr. M. F. Hill, of Newbury, (Byfield). Your Committee visited and examined the crop of Mr. Killam, Oct. 5th; found his field, containing about three acres, in stook. From this one (1) acre was set off for premium, and the accompanying statement and certificate give the result.

We would call particular attention to Mr. Killam's method of cultivating this important and profitable crop. His field being placed in squares enabled him to do his work with the cultivator. His field was level; no hill around the corn; free from weeds, showing a thoroughness seldom seen among our farmers. We would also call particular attention to the large amount of excellent fodder this acre produces, which experience proves to be nearly equal to English hay. This, with the amount of corn, one hundred and ten (110) bushels to the acre, is well worth the attention of our farmers. We award to Mr. Killam the Society's premium, $10, for the best crop of corn raised on one acre.

On the 8th of October we visited the field of Mr. M. F. Hill, of Newbury, (Byfield). This field contained one acre of corn. This crop followed a crop of onions for previous year and was in a high state of fertility and favorable for a good crop. We averaged this field and from this we hand the statement of Mr. Hill.

*Committee*—Asa Wade, S. B. Swan.

The Trustees passed the following vote with reference to crop of Mr. Killam:

*Voted*, That the Trustees consider that sufficient allowance has not been made for the shrinkage of the corn, thus over-

estimating the marketable value; also, that the value of corn fodder is somewhat overestimated.

CHARLES P. PRESTON, *Sec'y.*

### STATEMENT OF OLIVER P. KILLAM.

ESSEX AGRICULTURAL SOCIETY:

Statement concerning a crop of corn, raised by Mr. Oliver P. Killam, of West Boxford, and entered for premium at the Society's Fair for 1874.

This field was in grass for 1872 and 1873; no manure applied to it; soil, a dark gravelly loam 9 inches deep; on this was spread 4 cords of long manure from the barn cellar, (for this crop), then broken 8 inches deep, furrow laid flat and rolled down; on this was spread 2 cords of compost manure and well pulverized in with the harrow. Planted 25th of May 3 1-2 feet apart each way; 5 quarts of Yellow Eight Rowed Corn was used to the acre; cultivated three times each way; hoed twice. Harvested September 30th, by cutting up at the bottom and stooking in the field. November 5th, hauled to the barn, husked and weighed, giving 8823 pounds of corn on the cob, weighing 40 pounds to the basket of a bushel, 220 23-40 bushels of ears, giving a fraction over 110 bushels of shelled corn to the acre.

Expenses on the above:

| | | |
|---|---|---|
| To Interest and taxes on land | | $7 50 |
| To 6 cords of manure and spreading, &c., ½ for present crop | | 30 00 |
| To ploughing $5, rolling and harrowing $3 | | 8 00 |
| To seed and planting | | 4 00 |
| To cultivating and hoeing | | 5 00 |
| To harvesting and husking | | 8 00 |
| | | $62 50 |
| Credit by 110 bushels of corn at $1 per bushel | $110 00 | |
| " " 6 tons corn fodder at $10 per ton | 60 00 | |
| | | $170 00 |
| Balance in favor of the crop | | $107 50 |

November 9th, 1874.

STATEMENT OF MARK F. HILL.

Account of expense of one acre of field corn raised by Mark F. Hill, on the Dummer Academy Farm in Byfield, 1874:

| | Dr. |
|---|---|
| To seven cords barn manure, one-half to present crop | $35 00 |
| To ploughing once | 2 50 |
| To harrowing once | 1 00 |
| To seed | 50 |
| To planting | 6 00 |
| Hoeing with horse hoe twice | 5 00 |
| To thinning and weeding | 4 00 |
| To cut stalks | 3 50 |
| To husking in field | 4 00 |
| To cut but stalks and hauling | 3 00 |
| Interest and tax on land | 7 00 |
| | $71 50 |

| | Cr. | |
|---|---|---|
| By 73¼ bushels corn at $1.05 per bushel | $77 00 | |
| By corn fodder | 15 00 | |
| | $92 00 | |
| Cost of cultivation | 71 50 | |
| Profits | | $20 50 |

My corn piece had been planted to onions and cabbages for the two past years and manured well, and is in good tilth for a hay crop.

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## ROOT CROPS.

The Committee on Root Crops having attended their duties, report three entries of onions and one only of carrots, and express surprise that here in our root growing county, more entries of other root crops were not made. Y. G. Hurd, of Ipswich, enters 439 bushels of onions, grown upon one half an acre of land, showing uniformity of size and careful cultivation.

P. D. Adams, of Newburyport, enters his entire field of one acre and seventy-four rods, from which he has gathered 1431 1-2 bushels of fine, first quality onions, being nearly 1000 bushels per acre. Considering the size of his field, quality of the onions, and enormous crop, the Committee award to P. D. Adams the premium of $10.

S. A. Merrill, of Danvers, enters a crop of Long Orange Carrots, grown upon 21,000 square feet of land, from which he has harvested 527 bushels, or about 13 3-4 tons. While the Committee do not consider this a large yield, having seen from 35 to 40 tons per acre, yet considering the thorough cultivation, and uniformity of the crop, they would award to S. A. Merrill the premium of $10.

For the Committee,

Daniel Buxton, *Chairman.*

Note.—The Trustees voted not to adopt the Committee's recommendation of a premium, as above, of $10, to Mr. Merrill, inasmuch as the quantity of land was not sufficient to comply with the rules of the Society.

Charles P. Preston, Sec'y.

STATEMENT OF Y. G. HURD.

To the Committee on Root Crops of the Essex Agricultural Society:

I enter for premium one half acre of onions raised on the County land at the House of Correction, Ipswich, this year, 1874.

The land is a heavy loam on clay bottom, under drained. It was dressed in the spring with barn manure, which had been hauled out in the fall, at the rate of nine cords to the acre, as nearly as we could estimate. The land has been in onions three years. It was ploughed four inches deep and raked as smooth as possible. Seed was sown May 4th, at the rate of five pounds to the acre. The seed was Danvers Yel-

low, and judging by the crop, was a mixture of the flat and round. The rows were thirteen inches apart. Four weedings were necessary. The onions were topped in the field, and the crop was taken off, from the sixth to the fourteenth of October. As the most accurate mode of measurement, I had the entire crop weighed at the town scales. Reckoning 52 pounds to the bushel, and dividing the net weight by fifty-two, I found the number of bushels.

The crop weighed:

| | |
|---|---|
| Merchantable onions, - - - - - | 433 bushels. |
| Small and scullions, - - - - - | 15 " |
| Total, - - - - - | 448 bushels. |

The crop was sold from the field in bulk, by weight, as follows:

| | |
|---|---|
| 433 bushels at 75 cents per bushel, - - - | $324 75 |
| 6 " 60 " " - - - | 3 60 |
| Total, - - - - - - | $328 35 |

This leaves a balance of nine bushels on hand, which we use in soups, &c., for the institution. The labor is all done by convicts, under charge of an officer. In estimating the cost of raising half an acre of onions, I can estimate the labor. I think that for a farmer who hires it would be fair to call the labor for ploughing, sowing, hoeing, weeding and harvesting one half acre, - - - - - $50 00
Manure, 4 1-2 cords, at $8 per cord, - - - 36 00
Seed, 2 1-2 pounds, at $3.50 per pound, - - 8 75
Use of land, say - - - - - - - 10 00

| | |
|---|---|
| Total cost, - - - - - | $104 75 |
| Income, - - - - - | 328 35 |
| Net profit, - - - - - | $223 60 |

You will observe that the only estimates in this statement

are the manure and cost, and the labor and use of land. The remaining figures are accurate statements. I design to estimate the labor at a fair amount. If we had barreled the crop and stored, there would have been some necessary additions. But this was not done.

Ipswich, Nov. 4, 1874.

### STATEMENT OF P. D. ADAMS.

Having weighed my crop of onions, which I entered for a premium, I am prepared to make the following report:

First, I enter my *whole bed*, as I consider this the fair and proper way to show what can be done. (I could have cut out a half acre to better advantage.)

Whole bed, one acre and 74 rods.

| | Acre. | Rods. | |
|---|---|---|---|
| | 1 | 74 | |
| Manure, 7 1-2 cords—one-half slaughter-house, and one-half horse and cow manure, | | | $101 00 |
| Ploughing and harrowing, | | | 7 50 |
| Hauling manure, | | | 9 75 |
| To labor in cultivating, (*near as I can estimate*), | | | 76 83 |
| Total, | | | $105 27 |

Credit by number of bushels raised, 1431 1-2 bush.

Seed used, 7 1-2 lbs., - 7 1-2 lbs.

The two previous years, I used one-third part more manure, full as much as I could well plough in—ploughing about 7 inches deep. This year, I ploughed about 4 or 5 inches deep, and harrowed *heavily* with a *heavy* brush harrow, which made the manure at once available, and for the whole season. I got one and a half pounds of seed on more than I intended. We thinned out enough to have made (*we think*) 50 bushels—to the injury of the crop. They were *not so good* where we thinned.

The soil, not sandy, but rather a dark, dense, heavy loam. My description of the soil *may not be scientific.*

The onions have all been sold to various parties, except 52 bushels in my cellar. The buyers consider the size and quality unsurpassed.

STATEMENT OF SAMUEL A. MERRILL.

*Essex Agricultural Society:*

Statement concerning a crop of onions raised by Samuel A. Merrill, in the town of Danvers, on the Burley Farm. Measurement of land planted, 300 feet long by 70 feet wide.

In 1872 and 1873 the land was planted with onions. The manure used each of these years, as well as the past year, was a compost of barnyard manure, night-soil manure and muck, in about equal parts, at the rate of 8 cords to the acre. Soil is a yellowish loam, with clay pan. In preparing the land I did not plough it at all, but pulverized it four inches deep with Nesmith Cultivator—this process was used once before spreading the manure; and after the last cultivation I smoothed the land with a drag. Did not rake ground, it containing no stone. The cost of preparing the land, exclusive of the manure, was $2.50. The value of the manure on the land was $40.00. Planted upon the 20th of April, with the Danvers Sower. Used the Danvers Silverskin seed, one and a half pounds, at $5.00 a pound.

Cost of planting, $1.00; hoeing and weeding four times—no thinning out was necessary—$12.00. Pulled the onions September 28th, and after leaving them to dry on the ground till October 13th, carted them into the barn that day. The cost of harvesting and topping amounts to $25.00. The onions measured, after topping, 390 bushels. Value in barn, $1.00 per bushel.

The land was measured by Alonzo Hurd and myself.

Danvers, Nov. 9, 1874.

## IMPROVING WET MEADOW AND SWAMP LANDS.

The undersigned, members of the Committee on "Improving Wet Meadow and Swamp Lands," met at the farm of S. B. Bodwell, North Andover, September 21, to view a piece of reclaimed Swamp Land, offered by him for premium. This piece, of two acres, was covered five years ago with a thick growth of alders and underbrush, and upon part of it the water stood throughout the whole of every year. It was of little value, not over $30.00 an acre, and yielded no income.

In the spring of 1869, as Mr. Bodwell states, he mowed, cut and burned the bushes, put in one main ditch, and broke up with four yoke of oxen.

In 1870 he harrowed four or five times in course of the summer, and fall ploughed with two yoke of oxen, took up stones and stumps, and put in remainder of drains.

In 1871 he ploughed and harrowed and planted potatoes and cabbages, manured in the hills. The crop paid expenses of the year's work. In the fall he ploughed and sowed with Timothy and Red Top.

In 1872 he cut three tons of hay to the acre, in two cuttings. In the fall he top-dressed with four cords of stable manure to the acre.

In 1873 he sowed Red Clover in the spring, and cut fully three tons of hay per acre, mostly herd grass, for first crop, and one ton per acre for second crop.

In 1874 he cut three tons of hay per acre for first crop. At the time of the Committee's visit about half an acre had been cut the second time, from which twenty good sized cocks of hay had been put in. On the balance of the piece the second crop was standing, which the Committee saw, and which has since proved to be fully one and a half tons of hay per acre.

In 1868 Mr. Bodwell could keep but one horse all the time, and another about half the time. Last year he kept three

cows, two horses all, and one horse half the time, and sold four tons of hay; the increased product being largely from this reclaimed piece of land.

The cost of the improvement has been:

| | |
|---|---|
| In 1869, for labor and use of oxen, - - - | $134 75 |
| In 1870, " " " - - - | 128 50 |
| In 1871, (labor paid by crop,) for grass seed, - | 8 00 |
| In 1872, for manure $64, for labor in harvesting $30, | 94 00 |
| In 1873, for clover seed $2, " " " 30, | 32 00 |
| In 1874, for labor in harvesting, - - - - | 30 00 |
| | $427 25 |

The return has been twenty-three tons of hay in the barn, at $25 per ton—$575. Thus the improvement has considerably more than paid for itself, without reckoning the difference in the value of the land, which before draining gave nothing, and for the last three years has yielded an average of nearly eight tons of hay a year.

The Committee have carefully examined the details of cost in the above statement, and are satisfied with its correctness. Those who had seen the out-turn of hay testified that the yield had not been overstated.

They give Mr. Bodwell credit for a good deal of pluck in attacking as hard a piece of land of the kind as could probably be found in the county, and for energy and good management in persevering until the work was done; and looking at the example and the result they are unanimously of the opinion that he is entitled to the first premium of $15.

They commend the experiment to the notice of the owners of the large quantities of Wet Meadow and Swamp Land in the county, believing that when reclaimed under fair conditions and good management, the result never has failed, and never will fail to be very profitable.

*Committee*—Henry Saltonstall, William C. Sleeper, A. M. Bodwell, William Berry.

## SMALL FRUITS.

MR. CHAS. P. PRESTON, SECRETARY OF ESSEX AGRICULTURAL SOCIETY:

*Sir:*—I received notice from the Chairman of the Committee on Small Fruits that I had been appointed a member of that Committee, and was requested to meet with the members at the farm of Mr. Wm. Huff, of Newburyport, July 15th, to examine a crop of currants. I accordingly went to the place designated, but found none of the Committee there. Mr. Huff showed me his bushes and also about his farm, which I found to be in good order and very clean and free from weeds. He informed me that he had entered his crop of currants for the Society's premium, and desired me to make a statement of how I found it.

The variety he seems to make a specialty of is the *Mays Victoria*, and these are about all the currants he raises.

There were about thirty rods of ground set with the bushes, perhaps more than this; a part were ten years old, and the remainder some four or six years. The old bushes were very heavily laden with fruit and seemed to be well under the control of the cultivator. Those bushes of younger growth were not so full of fruit as the older ones, yet the crop was very large, and the berries hung in long clusters, which were just coloring and getting ripe.

In my opinion Mr. Huff's crop of currants is much above the average, and that he is deserving of a premium.

The *Mays Victoria* currant is a good variety to cultivate; it is a profuse bearer and the fruit is of a fine flavor, not quite so acid as the Red Dutch or La Versaliese; the bushes are also healthy, and the least apt to sucker of any sort with which I am acquainted.

Mr. Huff has set his bushes in a pear orchard, between the trees and about four feet apart in the row. Some of them have attained a very large size and will ripen this year from fourteen to sixteen quarts of fruit each. There are no weeds

allowed to grow among the rows or under the bushes. The soil is kept loose and fine by frequent hoeings.

The currant worm had made its appearance among the bushes, and some of the leaves had been eaten; but the lot taken together were in better condition than any I have seen this year.

Mr. Huff informed me that he had kept down the currant worm by the use of a liberal showering of copperas water, two or three times during the season. The receipt he gave me for its manufacture is as follows:

To 12 gallons of water add 1 pound of copperas; mix in a tub or barrel, or any other vessel convenient, and apply to the bushes with a common gardener's watering-pot. About three applications, when the bushes are growing, will generally suffice to rid them of the pest. The liquid is applied directly to the foliage; no bad effects are produced by its coming in contact with the tender leaves or shoots.

Geo. W. Taylor, *for the Committee.*

Peabody, Sept. 25th, 1874.

Note.—The Trustees voted to award to Mr. Huff the premium of Ten Dollars.

Chas. P. Preston, Sec'y.

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## TREADWELL FARM.

The Committee on the Treadwell Farm respectfully report, that the farm has been leased to Mr. T. W. Pierce, of Topsfield, for a term of seven years—the conditions of the lease being, that the lessee shall pay $500 rent per year; keep the fences in repair; manage the farm in a good husbandlike manner; conduct, at his expense, such experiments, on not more than two acres of land per year, as the Committee may direct; and to apply fifty cords of good merchantable manure

per year, provided that for a quarter part of said manure an equal value of approved (by the Committee) fertilizer may be substituted at the option of the lessee. The lessor is to keep the buildings in good repair.

In accordance with said lease the Committee have had the ell part of the house newly shingled and silled, and the shed and sheep barn shingled. The buildings are now in good repair.

A three year's experiment on two acres of land has been instituted for the purpose of showing the comparative value of manure and two commercial fertilizers, and the durability of their effects. A lot of two acres, as nearly similar in quality and condition as possible, was selected, and divided into four equal parts. After ploughing, part No. 1 was dressed with 1000 pounds of Russell Coe's superphosphate, part No. 2 with 1200 pounds of the Brighton Abattoir fertilizer, part No. 3 with four cords of good barnyard manure, and part No. 4 was left without any manure whatever. The whole was then sowed with barley and grass seed. The effect of the Abattoir fertilizer was very remarkable. There immediately sprung up on part No. 2 charlock, or wild mustard, that grew so rapidly and thickly as to completely choke and kill the barley and grass. The charlock was finally mowed and burned upon the ground, and the land ploughed and resowed with grass seed. The whole of the two acres is now covered with grass.

It is not to be supposed that the fertilizer caused the charlock in this particular lot, for the charlock came up on the other parts of the land just as thickly, but not until after the barley had got a sufficient start to keep it under. It is fair to conclude, however, that the Abattoir fertilizer has an especial tendency to promote the growth of charlock, and it seems to your Committee at least to hint that it may be adapted to promote the growth of flat turnips, as the two plants seem to be nearly allied.

The products of the other parts were as follows :

No. 1, Russell Coe's superphosphate yielded 1510 lbs. barley.
No. 3, Barnyard manure, " 1890 " "
No. 4, No manure, " 1310 " "

It was intended to have the same cash value of fertilizer or manure applied to each of the three parts manured.

This experiment has been conducted by Mr. Philbrook, who takes charge of Mr. Pierce's farming operations in Topsfield. The Committee are, so far, pleased with his apparent faithfulness in its management.

The other crops on the farm have been quite satisfactory. The hay crop was good, especially on the meadows. A large crop of mangolds was also raised. More than an acre of carrots was planted, of which those that came up made a great growth, but from some unexplained cause they were so thin that the crop was very much impaired.

*Committee*—Benjamin P. Ware, Geo. B. Loring, Chas. P. Preston, Wm. Sutton.

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## MEETING OF THE TRUSTEES.

At a meeting of the Trustees of the Society, November 20th, the following business was transacted:

The Committees on Grain and Root Crops, Improving Swamp and Waste Lands, Small Fruits, and the Treadwell Farm, reported and the reports were accepted.

The report of Mr. E. H. Payson, Treasurer, was read by him, accepted, and he was chosen Treasurer for the year ensuing.

Voted, To grant a scholarship of $50 to Geo. R. Dodge, in the Massachusetts Agricultural College, for the ensuing year.

VOTED, *That the Committees on Ploughing and Drawing with Oxen and Horses, be required to call the contestants together and read to them the rule, "that all teams must be entered in the names of their *owners*," and require that this rule be strictly complied with.

VOTED, That all stock shall be fed during the Exhibition; and longer if it is of necessity prevented from leaving.

Numerous amendments were made to the premium list, as will appear when published.

VOTED, That an exhibition and trial of agricultural implements, mowers, horse rakes, tedders, and other machines, be held in June next, under the direction of the Trustees; and the sum of One Hundred Dollars be appropriated for that purpose, and that the President and Secretary appoint a time and place for holding the meeting.

VOTED, To hold the next Cattle Show and Exhibition at Danvers.

VOTED, That the President appoint a committee of seven, to present to the Trustees, at their meeting in June next, a list of Committees for the next Show.

The following gentlemen were appointed:—Geo. B. Loring, J. D. W. French, Bennett Griffin, A. B. Fellows, Jos. S. How, J. B. Swett and Paul T. Winkley.

VOTED, To appropriate the sum of fifty dollars toward a memorial to be erected to commemorate the life and services of the late Alexander Agassiz.

VOTED, That the Secretary be authorized to appoint an assistant at his discretion.

VOTED, That a committee of five persons be chosen to report to the Trustees in June as to the expediency of providing covered pens for animals at the Show, estimating the expense, &c.

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*NOTE. This vote was passed on account of information that parties had hired or borrowed cattle and horses of others to compete for the premiums the present year.

The committee are—William Sutton, George B. Loring, Benj. P. Ware, J. D. W. French and Chas. P. Preston.

Dr. Loring offered resolutions of respect to the memory of John Keeley, one of the Vice Presidents recently deceased, which are published herewith.

CHAS. P. PRESTON, Secretary.

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## JOSHUA L. NEWHALL.

At a meeting of the Trustees held at Salem, June 23d, 1874, Hon. Allen W. Dodge offered the following resolutions on the death of Joshua L. Newhall, Esq., one of the Vice Presidents of the Society, which were unanimously adopted:

RESOLVED, That we have heard with a deep sense of our loss, of the death of one of our Vice Presidents, JOSHUA L. NEWHALL, who through so many years manifested the greatest interest, intelligence and activity in the affairs of this Society.

RESOLVED, That we cherish with high regard the memory of his well directed and persevering efforts to exemplify what may be accomplished by farming in his own County.

RESOLVED, That we sympathize with the family of the deceased in their bereavement, and that the Secretary send them a copy of these resolutions.

Mr. Dodge, in addressing the meeting, said, that next to yourself, Mr. President, our deceased friend was probably the largest land holder in the County. In saying this, I mean, said Mr. Dodge, owner of the largest acreage of productive land lying together in Essex County. His farm lying on Turkey Hill in Newburyport consisted of five hundred acres in one compact body that he had bought from time to time, and from an impoverished condition brought to a high state of

cultivation. This he had done, not by a lavish expenditure of money in commercial fertilizers, but by an economical husbanding all the manurial resources at his command from the farm and the city, so wisely applied as to yield the best results. He understood the value of manure as a top-dressing, and his own land told the story of the use of that knowledge. I think I have nowhere seen field after field of thicker clover and herds grass than it was my privilege to see on Mr. Newhall's farm a few years since early in June. It was a wonder to me, a new revelation, and I asked how it had been done. He then and there narrated in a plain and modest way the methods of his success. It was the very best field lecture I ever listened to.

But I remembered that our deceased friend was a son of one of the very best of our Essex County farmers, Asa Tarbell Newhall—himself also gone to his rest; and I ceased to marvel. I will mention but one thing more which contributed, as it seems to me, to the success of that son in his farming. He attended personally to his business. He knew every cow in his herd of sixty, and whether she was giving a profit on the keeping. If not, that cow was turned to beef or otherwise disposed of. He went daily to market with the milk and other products of his farm. I will venture to say that he made but few, if any, bad debts. I am sure he lost nothing by market men, for he employed none. He was strong where many a farmer is weak. He knew when, and where and how to sell. Hence he was as he desired to be, a successful farmer. But I will not enlarge on this point, and will only add that his interest in our Society was unabated to the last, marked as it was by the same energy, and sagacity, that characterized his farming. He had faith in the Society as keeping alive an interest in the cultivation of the soil, especially the cultivation of the soil of Essex County, which in his opinion was the safest and best investment that could possibly be made.

## JOHN KEELEY.

At a meeting of the Trustees, held at Salem November 20th, 1874, Hon. George B. Loring made the following remarks on the death of JOHN KEELEY, ESQ., of Haverhill, one of the Vice Presidents of this Society, and offered resolutions which, after further remarks by Messrs. Benj. P. Ware and Josiah Newhall, were unanimously adopted:

*Mr. President:*—I rise to make a painful and unexpected announcement, and to discharge a duty which we as a Society owe to a respected and esteemed, departed friend. Within a few days Mr. JOHN KEELEY, of Haverhill, one of our most efficient members, long a Trustee, and lately one of our Vice Presidents, has suddenly been summoned to another world. This loss we all, I am sure, deeply deplore, conscious as we must be that the vacancy created by the death of Mr. Keeley cannot easily be filled. He was one of the best of our Essex County yeomen, a careful and accurate farmer, a conscientious observer, a prudent manager, a useful citizen. At a time when the glittering temptations of more active business induced so many of our young men to leave the occupation of their fathers, and expose themselves to the risks, for the sake of securing the possible rewards of the busy world, he chose to discharge quietly and faithfully the duty which devolved upon him in the community and occupation to which he was born. His success may well encourage the young men of our County to follow his example; and the respect and esteem in which his memory will be held by all who knew him should teach them the value of honest and unassuming endeavor to discharge well the duties of life. There is no legacy more valuable than this. The glories which attend exalted position, bedimned as they often are by the trials and conflicts which surround them, can never outshine the mild and cheerful light which steadily illumines the path of simple and faithful duty. To perpetuate the memory of a life thus wrought out, and to pay a tribute of respect to a man thus animated, is a duty and

a true consolation. Not to ourselves alone, his friends and associates, but to this County and this community do we owe it that the example of Mr. Keeley should not be forgotten. As an expression, therefore, of our high esteem for his character and services, of our respect for his memory, of our sorrow over his departure, and of our sympathy with his family in their trial and affliction, I offer these resolutions, and move their adoption as the sense of this body:

Resolved, That the Trustees of the Essex Agricultural Society learn with profound sorrow the death of their associate, John Keeley, Esq., one of the Vice Presidents of the Society, a useful, efficient, and devoted member, and a citizen who enjoyed through a long life the respect and esteem of the community in which he lived.

Resolved, That the Secretary of the Society communicate this expression of our regard and respect to the family of Mr. Keeley.

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## ESSAYS AND REPORTS OF COMMITTEES.

The Committee on "Essays and Reports of Committees" report that one Essay and five Reports were submitted to us for examination.

For the Reports we award as follows:

To Benj. P. Ware, for "Report on Ploughing with Swivel Ploughs," first premium, $10.00.

To Henry Saltonstall, for Report on "Improving Wet Meadow and Swamp Land," second premium, $8.00.

To James Flint, for Report on "Ploughing with Single Teams," third premium, $6.00.

In regard to the Essay we were somewhat in doubt, but while it gave evidence of care and labor it did not appear to us to possess such merit as an agricultural paper as to entitle it to a premium.

Daniel E. Safford, *Chairman of Committee.*

Salem, Nov. 30, 1874.

## Dr. EDWARD H. PAYSON, TREAS., IN ACCT WITH THE ESSEX AG. SOCIETY. Cr.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1873. | | | | 1873. | | | |
| September. | To balance of former account rendered, . . . | | $1361 70 | September. | By Premiums and Gratuities awarded by the Trustees, . . . . . | $1207 00 | |
| October. | To Bank dividends for October, . . . . . | | 425 20 | October. | By additional do. awarded, . . . | 160 00 | |
| | To receipts of Exhibition at Gloucester, 1873, per Mr. Haskell's account, . . . . . | | 1271 03 | | | | $1367 00 |
| December. | To Bank tax refunded by the State, . . . . | | 254 98 | December. | By Scholarship paid Geo. R. Dodge, . . . . | | 50 00 |
| | To State Bounty, . . . . . | | 600 00 | 1874. | | | |
| | To Donation from Gen. Sutton, . . . . . | | 25 00 | January. | By expenses of Exhibition at Gloucester, per Mr. Haskell's account, . . . . . | | 1261 79 |
| 1874. | | | | | By expenses of Exhibition paid by Treasurer, viz: Printing, . . | $542 51 | |
| January. | To dividend from First Nat. Bank, Salem, . | | 72 00 | | Sundry bills, . | 207 82 | |
| | To coupons of Essex R. R., . . . . . | | 21 00 | | | | 750 33 |
| April. | To Bank dividends for April, . . . . . | | 526 50 | | By rent to Atheneum $25.00, advertising $2 00, | | 27 00 |
| July. | To dividend from First Nat. Bank, Salem, . | | 90 00 | | By Secretary's account, . . . . . | | 155 42 |
| | To coupons of Essex R. Road, . . . . . | | 21 00 | | By amount invested in Salem Gas Co. stock, . | | 687 75 |
| March. | To rent of Treadwell Farm, . . . . . | | 500 00 | | By balance to new account, . . . . . | | 1193 12 |
| September. | To premiums unclaimed, . . . . . | | 192 00 | | | | |
| | To New Members account, . . . . . | | 132 00 | | | | |
| | | | $5,492 41 | | | | $5,492 41 |

# FUNDS BELONGING TO THE SOCIETY.

| | *Cost on the books.* | *Present value.* |
|---|---|---|
| 16 shares Warren National Bank, | $1595 40 | $2240 00 |
| 15 shares South Danvers Bank, | 1471 25 | 2400 00 |
| 5 shares First National Bank, Danvers, par, | 375 00 | 500 00 |
| 5 shares National Revere Bank, | 585 87 | 600 00 |
| 8 shares National Exchange Bank, Salem, par, | 800 00 | 1000 00 |
| 18 shares First National Bank, Salem, | 1914 66 | 2300 00 |
| 12 shares Mercantile National Bank, Salem, | 1226 50 | 1500 00 |
| 23 shares Merchants National Bank, Salem, | 1189 50 | 1600 00 |
| 42 shares Asiatic National Bank, Salem, | 1281 25 | 1700 00 |
| 18 shares Salem National Bank, Salem, | 2000 00 | 2500 00 |
| 6 shares Salem Gas Company, | 687 75 | 700 00 |
| $700 Essex Rail Road bonds, | 700 00 | 630 00 |
| Cash on hand, as above, | 1193 12 | 1193 12 |
| | $15,020 30 | $18,863 1 |
| Funds in 1873, | 14,501 12 | |
| Gain in 1874, | $519 17 | |

E. E. EDWARD H. PAYSON, Treasurer.

SALEM, September, 1874.

The subscriber has examined the foregoing account of receipts and disbursements of the Treasurer, and also his statement of the funds belonging to the Society, (showing a balance in his hands of $1193.12) and finds the same well vouched and correct.

CHARLES KIMBALL, Auditor.

SALEM, December 16, 1874.

# OFFICERS OF THE SOCIETY.

## FOR 1874-5.

PRESIDENT.

WILLIAM SUTTON, of Peabody.

VICE PRESIDENTS.

GEORGE B. LORING, of Salem.
PAUL T. WINKLEY, of Newburyport.
*JOHN KEELEY, of Haverhill.
BENJAMIN P. WARE, of Marblehead.

TREASURER.

EDWARD H. PAYSON, of Salem.

SECRETARY.

CHARLES P. PRESTON, of Danvers.

HONORARY TRUSTEES.

*JOHN W. PROCTOR, of Peabody.
ALLEN W. DODGE, of Hamilton.
JOSEPH HOW, of Methuen.

*Deceased.

TRUSTEES.

Charles C. Blunt, Andover;
G. W. Boynton, Georgetown;
Eben G. Berry, Danvers;
Thomas J. Clark, Salisbury;
J. H. Cheever, Manchester;
Francis Dane, Hamilton;
Levi Emery, Lawrence;
Henry W. Foster, Beverly;
Alonzo B. Fellows, Ipswich;
J. D. W. French, N. Andover;
James Flint, Middleton;
Bennett Griffin, Gloucester;
J. J. H. Gregory, Marbleh'd;
Ariel H. Gould, Topsfield;
Joseph S. Howe, Methuen;
Henry Hobbs, Wenham;
James P. King, Peabody;
W. E. Kimball, Bradford:
Joshua N. Kent, Newbury;
E. K. Lee, Essex;
Josiah Newhall, Lynnfield;
C. K. Ordway, W. Newbury;
Wm. H. Patch, Rockport;
Charles Perley, Boxford;
E. P. Robinson, Saugus;
Allen Rowe, Swampscott;
J. B. Swett, Haverhill;
D. H. Stickney, Groveland;
John L. Shorey, Lynn;
R. A. Smith, Newburyport;
Geo. W. Simmons, Nahant;
Aaron Sawyer, Amesbury;
Daniel J. Hale, Rowley.

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NEW MEMBERS—1874.

Henry C. Allen, Danvers;
Nathan F. Abbott, Andover;
Albert Berry, No. Andover;
J. Q. A. Batchelder, Danvers;
N. J. Clark, Danvers;
Rufus Choate, Essex;
Chas. L. Carter, Andover;
Forest C. Dodge, Beverly;
John H. Flint, Andover;
Cornelius Gaffney, Danvers;
A. Griswold, Beverly;
E. W. Greene, No. Andover;
Geo. H. Gibney, Salem;
Jacob O. Goodale, Peabody,
Edward P. Kimball, Essex;
A. E. Lufkin, Essex;
John C. P. Legro, Danvers;
Francis W. Lyford, Danvers;
Augustus Mudge, Danvers;
Fred. Marsh, Peabody;
Sidney A. Merriam, Topsfield;
Walter S. Merrill, Danvers;
Asa T. Newhall, Lynn;
George Pratt, Danvers;
S. J. Pettingill, Salem;
L. D. Pettingill, Salem;
Joseph C. Putnam, Danvers;
Joshua Roberts, Danvers;

Henry Hale, Salem ;
Henry A. Hale, Salem ;
Elias Ham, Danvers ;
W. G. Hatch, Danvers ;
Francis H. Johnson, Andover ;
Wm. F. Kimball, Lawrence ;
Joel Kimball, Jr.. Danvers ;
Joseph Knight, Newburyport ;
Mrs. F. Stiles, Middleton ;
Jos. B. Smith, Newburyport ;
E. L. Smith, Newburyport ;
Benjamin F. Tufts, Danvers ;
Joseph Tracy, Danvers ;
Geo. W. Taylor, Peabody.

☞Any citizen in the County may become a member by paying the sum of three dollars to increase the permanent funds of the Society, and he will receive a certificate of his membership from the Secretary. No fines or assessments are ever imposed. Members are entitled to the free use of the Library, and a copy of the Transactions each year. All ordained Ministers of the Gospel residing in the County, and editors of newspapers, published therein, are entitled to the privileges of the Library.

# LIST OF PREMIUMS, &C.

FAT CATTLE.

| | |
|---|---|
| Joseph Kittredge, North Andover, 1st premium, | $12.00 |
| C. P. Mighill, Rowley, for near ox, 2d premium, | 10.00 |
| C. P. Mighill, Rowley, for off ox, 3d premium, | 6.00 |

BULLS—TWO YEARS OLD, OR UPWARDS.

| | |
|---|---|
| J. D. W. French, No. Andover, Ayrshire, 1st prem., | 12.00 |
| Nathan P. Proctor, Danvers, Ayrshire, 2d premium, | 6.00 |
| G. W. Russell, Lawrence, Jersey, 1st premium, | 12.00 |
| John Swinerton, Danvers, Jersey, 2d premium, | 6.00 |

BULLS—UNDER TWO YEARS OLD.

| | |
|---|---|
| Henry Saltonstall, Peabody, yearling Jersey, 1st prem., | 6.00 |
| W. J. Dale, Jr., No. Andover, do 2d prem., | 3.00 |
| E. T. Northend, Newburyport, do., short horn, 1st " | 6.00 |

DEVONS—TWO YEARS OLD, AND UPWARDS.

| | |
|---|---|
| C. S. Bradley, West Newbury, Devon, 1st premium, | 12.00 |
| Samuel C. Cook, Wenham, do., 2d premium, | 6.00 |

DUTCH—TWO YEARS OLD, AND UPWARDS.

| | |
|---|---|
| Jos. Knight, Newburyport, Dutch, 1st premium, | 12.00 |
| A. Knowlton, Essex, do., 2d premium, | 6.00 |

BEST THOROUGHBRED BULL—of any age or breed, with five calves of his stock not less than one year old:

| | |
|---|---|
| J. D. W. French, North Andover, | $20.00 |
| Volney C. Stowe, Salem, | 10.00 |

MILCH COWS.

| | |
|---|---|
| H. G. Herrick, Lawrence, 1st premium, | $18.00 |
| Henry Saltonstall, Peabody, 2d premium, | 12.00 |
| J. D. W. French, North Andover, 3d premium, | 6.00 |

THOROUGHBRED AYRSHIRE.

| | |
|---|---|
| J. D. W. French, North Andover, 1st premium, | 12.00 |
| B. P. Ware, Marblehead, 2d premium, | 6.00 |

THOROUGHBRED JERSEY.

| | |
|---|---|
| Henry Saltonstall, Peabody, 1st premium, | 12.00 |
| G. W. Rogers, Peabody, 2d premium, | 6.00 |

GRADES.

| | |
|---|---|
| E. G. Berry, Danvers, 1st premium, | 12.00 |

HEIFERS.

| | |
|---|---|
| J. D. W. French, No. Andover, Ayrshire in milk, 1st premium, | 12.00 |
| J. D. W. French, North Andover, Ayrshire under 3 years old, 1st premium, | 6.00 |
| J. D. W. French, North Andover, Ayrshire under 3 years old, 2d premium, | 4.00 |
| B. P. Ware, Marblehead, Ayrshire calf 4 months old, 1st premium, | 5.00 |
| J. D. W. French, North Andover, Ayrshire calf 4 weeks old, 2d premium, | 3.00 |
| Francis Dane, Hamilton, Jersey Heifer, 1st premium, | 6.00 |
| Henry Saltonstall, Peabody, Jersey Heifer, 2d " | 4.00 |
| C. S. Bradley, W. Newbury, Devon " 1st " | 6.00 |
| C. S. Bradley, " " " " 2d " | 4.00 |
| E. T. Northend, Newburyport, short horn heifer in milk, 1st premium, | 12.00 |
| E. T. Northend, Newburyport, short horn heifer in milk, 2d premium, | 6.00 |
| C. J. Peabody, Topsfield, grade heifer in milk, 1st premium, | 12.00 |
| Albert W. Dodge, Hamilton, grade heifer not in milk, 1st premium, | 6.00 |
| Volney C. Stowe, Salem, grade heifer not in milk, 2d premium, | 4.00 |

WORKING OXEN.

| | |
|---|---|
| James M. Perry, Danvers, 1st premium, | $15.00 |
| Ariel H. Gould, Topsfield, 2d premium, | 12.00 |
| Dr. Shreve and R. Price, Topsfield, 3d premium, | 10.00 |

BEST TEAMSTER OF OXEN.

| | |
|---|---|
| Wm. G. Horton, Ipswich, Loring premium, | 10.00 |

TOWN TEAM.

| | |
|---|---|
| Topsfield ox team, 18 pairs, | 20.00 |
| North Andover ox team,16 pairs, | 10.00 |
| Danvers horse team, | 20.00 |
| Essex horse team, | 10.00 |

STEERS.

| | |
|---|---|
| Jos. Kittredge, No. Andover, 3 years old, 1st prem., | 8.00 |
| Romulus Jaques, W. Newbury, 2 " " 1st " | 6.00 |
| Jos. Kittredge, No. Andover, 2 " " 2d " | 5.00 |
| G. W. Russell, Lawrence, yearlings, 2d " | 4.00 |

STALLIONS—FIRST CLASS.

| | |
|---|---|
| G. W. Rogers. Peabody, 1st premium, | 18.00 |
| N. J. Clark, Danvers, 2d premium, | 12.00 |
| Thomas Sawyer, Boxford, 3d premium, | 10.00 |

STALLIONS—SECOND CLASS.

| | |
|---|---|
| J. W. Trask, Beverly, 1st premium, | 10.00 |
| C. S. Clark, Salem, 2d premium, | 6.00 |

BROOD MARES.

| | |
|---|---|
| G. W. Rogers, Peabody, 1st premium, | 18.00 |
| John Gibney, Salem, 2d premium, | 12.00 |
| George B. Martin, Danvers, 3d premium, | 10.00 |

FAMILY HORSES.

| | |
|---|---|
| Samuel James, Gloucester, 1st premium, | 18.00 |
| Thomas W. Pierce, Topsfield, 2d premium, | 12.00 |
| C. C. Cressy, Gloucester, 3d premium, | 10.00 |

FARM AND DRAFT HORSES.

| | |
|---|---|
| B. P. Ware, Marblehead, 1st premium, | $15.00 |
| Cornelius Gaffney, Danvers, 2d premium, | 12.00 |
| Orrin Putnam, Danvers, 3d premium, | 10.00 |
| J. F. Dane, Hamilton, 4th premium, | 6.00 |

PAIRS OF DRAFT HORSES.

| | |
|---|---|
| Edward H. Brown, Gloucester, 1st premium, | 15.00 |
| Herbert A. Knowlton, Essex, 2d premium, | 10.00 |

COLTS—FIRST CLASS.

| | |
|---|---|
| For the best mare or gelding, four year old colt, 1st premium to Vermont Boy, | $12.00 |
| 2d premium to Jos. Tracey, Salem, for "Queen Bess," | 8.00 |
| 3d premium, to J. D. W. French, of North Andover, for "Duke," | 5.00 |
| For the best three year old colt,—1st premium to G. W. Rogers, Salem, for "Defiance, Jr.," | 10.00 |
| 2d premium to John Gibney, Salem, for "Queen Bess," | 5.00 |
| 3rd premium, to J. D. W. French, of North Andover, for "Cato." | 3.00 |

COLTS—SECOND CLASS.

| | |
|---|---|
| C. F. Pendergast, Salisbury, 2 year old colt, 1st prem., | 8.00 |
| S. P. Prescott, Haverhill, 2 " " 2d " | 3.00 |
| Emerson Whipple, Hamilton, yearling, 1st premium., | 8.00 |
| A. Titcomb, Rowley, 2d premium, | 3.00 |

SWINE.

| | |
|---|---|
| J. D. W. French, North Andover, for boar, 1st prem., | 10.00 |
| Robert G. Buxton, Peabody, 2d premium, | 6.00 |
| Jos. Kittredge No. Andover, breeding sow, 1st prem., | 10.00 |
| W. J. Dale, Jr., North Andover, 2d premium, | 6.00 |
| Daniel Carlton, No. Andover, weaned pigs, 1st prem., | 6.00 |
| G. W. Rogers, Peabody, 2d premium, | 4.00 |

SHEEP.

| | |
|---|---|
| Daniel Carleton, North Andover, buck, 1st premium, | $8.00 |
| Francis Dane, Hamilton, flock, 1st premium, | 10.00 |
| Francis Dane, Hamilton, lambs, 1st premium, | 4.00 |

PLOUGHING—DOUBLE TEAMS.

| | |
|---|---|
| Joseph Horton, Ipswich, 1st premium, | $12.00 |
| Addison Child, Swampscott, 2d premium, | 10.00 |

PLOUGHING—SINGLE TEAMS.

| | |
|---|---|
| Richard T. Jaques, Newbury, 1st premium, | 10.00 |
| Charles P. Preston, Danvers, 2d premium, | 7.00 |

PLOUGHING—HORSES.

| | |
|---|---|
| Silvester Dane, Hamilton, 1st premium, | 12.00 |
| Orrin Putnam, Danvers, 2d premium, | 10.00 |
| R. S. Bray, Newbury, 3d premium, | 8.00 |
| Romulus Jaques, West Newbury, 4th premium, | 6.00 |
| G. W. Russell, Lawrence, 5th premium, | 4.00 |

BEST TEAMSTER OF HORSES.

| | |
|---|---|
| Joseph C. Putnam, Danvers, premium, | 10.00 |

PLOUGHING—SWIVEL PLOUGH.

| | |
|---|---|
| A. H. Gould, Topsfield, 1st premium, | 12.00 |
| Wm. Foster, North Andover, 2d premium, | 10.00 |
| Joseph Kittredge, North Andover, 3d premium, | 8.00 |

PDOUGHING—BY BOYS—SUTTON PREMIUM.

| | |
|---|---|
| Wm. G. Horton, Ipswich, 17 years old, 1st premium, | 25.00 |
| Willie E. Merrill, W. Newbury, 18 yrs. old, 2d prem., | 15.00 |

AGRICULTURAL IMPLEMENTS.

| | |
|---|---|
| Ames Plow Co., Boston, best collection, 1st premium, diploma, and | $15.00 |
| W. B. Peart, Danvers, best farm wagon, | 5.00 |
| Henry Hobbs, Wenham, best team harness, | 5.00 |
| Whittemore & Bros., Boston, best hay cutter, | 3.00 |
| Ames Plow Co., Boston, best ox yoke, | 3.00 |
| S. S. Hickok, Methuen, potato diggers, | 5.00 |
| Dole & Osgood, Peabody, horse shoes, | 1.00 |
| E. E. Lummus & Co., Boston, mowing machine and seed sower, | 7.00 |
| Albert W. Howe, Danvers, root shovel, | 1.00 |
| Hale & Co., Salem, seed sower, | 2.00 |
| E. E. Lummus & Co., Boston, cider mill, | 3.00 |
| Hale & Co., Salem, collection of implements, | 4.00 |
| Charles Frizell, Boston, step ladder, | 1.00 |

CARRIAGES.

| | |
|---|---|
| William Gunnison, & Co., Amesbury, top buggy, 1st premium, | 15.00 |
| W. B. Peart, Danvers, express wagon, 1st premium, | 10.00 |
| H. H. Pillsbury, Danvers, best display, gratuity, | 5.00 |
| Dole & Osgood, Peabody, open buggy, diploma. | |

DAIRY.

| | |
|---|---|
| Amos F. Hobbs, Wenham, butter, 1st premium, | 10.00 |
| Mrs. Farnham Stiles, Middleton, butter, 2d premium, | 8.00 |
| G. W. Russell, Lawrence, butter, 3d premium, | 6.00 |
| Mrs. P. T. Winkley, Newburyport, butter, 4th prem., | 4.00 |

GRAIN CROPS.

| | |
|---|---|
| Oliver P. Killam, Boxford, corn crop, 1st premium, | 10.00 |

ROOT CROPS.

| | |
|---|---|
| P. D. Adams, Newbury, onion crop, 1st premium, | 10.00 |

RECLAIMING LANDS.

S. B. Bodwell, North Andover, reclaiming land, 1st premium, $15.00

SMALL FRUITS.

William Huff, Newburyport, currant crop, 1st prem., 10.00

REPORTS OF COMMITTEES.

| | |
|---|---|
| B. P. Ware, Marblehead, 1st premium, | 10.00 |
| Henry Saltonstall, Peabody, 2d premium, | 8.00 |
| James Flint, Middleton, 3d premium, | 6.00 |
| Awarded by Committee on Poultry, | $122.00 |
| " " " " Bread and Honey, | 27.00 |
| " " " " Fruits, | 230.00 |
| " " " " Flowers, | 32.00 |
| " " " " Vegetables and Seeds, | 161.00 |
| " " " " Counterpanes, &c., | 36.00 |
| " " " " Leather, | 19.00 |
| " " " " Manufactures, &c., | 16.00 |
| " " " " Fancy Work, &c., | 53.00 |
| | $1840.00 |

## RECAPITULATION.

FARMS.

| | | |
|---|---|---|
| Amount awarded to Ploughing, | $159.00 | |
| " " Farm Implements and Carriages, | 85.00 | |
| | | $244.00 |

FARM STOCK.

| | | |
|---|---|---|
| Amount awarded to Fat Cattle, | $28.00 | |
| " " Bulls, | 117.00 | |
| *Amount carried forward,* | $145.00 | $244.00 |

| | | | | |
|---|---|---|---|---|
| *Amount brought forward,* | | | $145.00 | $244.00 |
| Amount awarded to | | Milch Cows, | 84.00 | |
| " | " | Heifers, | 90.00 | |
| " | " | Working Oxen and teamsters, | 47.00 | |
| " | " | Town Teams, | 60.00 | |
| " | " | Steers, | 23.00 | |
| " | " | Stallions, | 56.00 | |
| " | " | Brood Mares, | 40.00 | |
| " | " | Family Horses, | 40.00 | |
| " | " | Farm and Draft Horses, | 43.00 | |
| " | " | Pairs Draft Horses, | 25.00 | |
| " | " | Colts, | 65.00 | |
| " | " | Swine, | 42.00 | |
| " | " | Sheep, | 22.00 | |
| " | " | Poultry, | 122.00 | |
| | | | | $904.00 |

FARM PRODUCE, ETC.

| | | | | |
|---|---|---|---|---|
| Amount awarded to | | Vegetables and seeds, | $161.00 | |
| " | " | Fruits, | 230.00 | |
| " | " | Flowers, | 32.00 | |
| " | " | Dairy, | 28.00 | |
| " | " | Bread, &c., | 27.00 | |
| " | " | Root Crops, | 10.00 | |
| " | " | Grain Crops, | 10.00 | |
| " | " | Reclaiming Land, | 15.00 | |
| " | " | Small Fruits, | 10.00 | |
| " | " | Reports of Committess, | 24.00 | |
| " | " | All other objects, | 146.00 | |
| | | | | $693.00 |
| | | | | $1840.00 |

# CONSTITUTION

— OF THE —

# ESSEX AGRICULTURAL SOCIETY.

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ARTICLE I. There shall be a President, four Vice Presidents, a Secretary and a Treasurer, who shall be Trustees, *ex-officio;* in addition to these, thirty (originally twelve) other Trustees shall be chosen from the members at large, all of whom shall continue in office until others are elected in their stead.

ARTICLE II. There shall be an Annual Meeting of the Society, at such time as the Trustees shall determine; at which all officers shall be elected. Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. III. If at any meeting of the Society, or the Trustees, the President and Vice Presidents shall be absent, the members present may appoint one from among them to preside at such meeting.

ART. IV. The President, or in case of his absence, either of the Vice Presidents, with the advice of the Trustees, may call a special meeting of the Society; or whenever a written

application, with the reasons assigned therefor, shall be made by any twelve members of the Society, to the President and Trustees, they shall call such meeting.

Art. v. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon; seven of whom with the presiding officer shall make a quorum.

Art. vi. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper, (provided the premiums offered do not exceed the funds of the Society:) and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

Art. vii. The Secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

Art. viii. The Treasurer shall receive all moneys due or payable to the Society, and all donations that may be made to it; for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such moneys as he shall have orders for from the Trustees; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in such sum as the Trustees shall direct, and with such sureties.

ART. IX. A committee shall be appointed annually by the Trustees to audit the Treasurer's accounts, who shall report to the Society; and the same being accepted shall be entered by the Secretary in his books.

ART. X. In case of the death, resignation, incapacity, or removal out of the county of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. XI. Any citizen of the county may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. XII. A Committee shall be raised from time to time to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our country; the same to be sacredly appropriated to that purpose.

ART. XIII. All ordained ministers of the Gospel who reside within the county, shall be admitted honorary members of the Society.

ART. XIV. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

# AMENDMENTS TO THE CONSTITUTION.

## ADOPTED SEPT. 29TH, 1863.

ARTICLE I. The officers of the Society shall consist of a President, four Vice Presidents, a Treasurer, Secretary, and thirty Trustees.

ART. II. A Committee of one from each city and town in the county, represented in the Society, shall be appointed at each annual meeting, by nomination from the floor, to report a list of officers, (with the exception of Treasurer,) at the next succeeding annual meeting, which report shall be acted on, and the officers elected at said meeting by the ballots of the members present.

ART. III. The Treasurer shall be elected annually by the Trustees, at their meeting in November.

ART. IV. The Committee on nomination shall hold its meeting prior to the first day of July each year; and its report shall be immediately placed in the hands of the Secretary, for the examination of any member of the Society; and the Secretary shall cause ballots to be prepared in conformity with said report, for the use of the members, and presented at the annual meeting.

ART. V. The first election under these amendments to be had at the annual meeting in 1864, and they shall only apply to the Trustees so fast as they go out of office under the present tenure of election.

## AMENDMENT ADOPTED SEPT. 24TH, 1867.

Trustees of the Society shall not be eligible to act upon the nominating committee; and members of the nominating committee shall not be eligible as candidates for Trustees.

## AMENDMENT ADOPTED SEPT. 29TH, 1868.

Each member of the Committee for the nomination of officers shall be empowered to appoint a substitute in case he declines serving.

## AMENDMENT ADOPTED SEPT. 23D, 1873.

Article 1st amended so as to provide that one Trustee from each town in the county, in which there are members of the Society, shall be chosen from the members at large.

# LIBRARY.

The LIBRARY is established at the Plummer Hall, Essex Street, Salem, where members can obtain books under the following

## REGULATIONS:

1. Each member shall be entitled to take from the Library TWO VOLUMES, on signing a receipt for the same, and agreeing to be accountable therefor.

2. No member shall keep any book more than two weeks, after being notified (by the Librarian) that the same is wanted by another member.

3. All books belonging to the Library shall be returned on or before the 15th of November in each year; that the same may be examined and the condition of the Library reported to the Trustees.

4. Any member who shall neglect or refuse to conform to these Regulations shall thereby forfeit the privilege of taking books from the Library.

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# TRANSACTIONS

OF THE

# ESSEX AGRICULTURAL SOCIETY,

## IN MASSACHUSETTS,

**For the Year 1875,**

WITH THE

## FIFTY-THIRD ANNUAL ADDRESS,

BY

## REV. E. C. BOLLES.

—o—

**Published by order of the Society.**

—o—

DANVERS, MASS:
PUTNAM & BARNES, PRINTERS.
1875.

# ADDRESS.

———o———

*Mr. President, and Gentlemen of the Essex Agricultural Society* :—

It would seem that the half-century of this Society's existence should have given it greater wisdom in the choice of a speaker for to-day. There is probably no one in this assembly less familiar with practical agriculture than myself. My one experiment in this department was with beans. The poles attained their full height in a single day; the beans I never saw again till I dug for them; when they were discovered, alike untouched by germination or decay. Many of them must still remain in the same ground, to reward some future explorer with unchangeable proof of my veracity. But the experience yielded a crop of wisdom, in my determination to adhere to my own occupation and leave beans to those who knew them better than I.

Nor would even the compliment of your invitation have led me to yield so sensible and fixed a purpose, had I not remembered that compliance with your wishes might help me to the partial quittance of a debt long since incurred to the agricultural world. In my boyhood, holidays were few. It is easy to recall the scenery lit by their passing gleams of liberty so long

ago. Not a sight or sound is there that will not return at memory's voice. Now, thirty years ago, the Agricultural Fair and Cattle Show was the crowning pleasure of the year. Then the old "South Green" was covered with its cattle pens, and imprisoned swine, and closely cooped fowls. Choice knots of farmers, each the centre of an admiring crowd, gathered here and there before some favorite animal to discuss his points or bulk. Committee-men, stirring and be-ribboned, went from place to place with a long following of boys and rustics, an impromptu court to ratify or criticise their verdict. Watchful sentinels stood before the cages of the more delicate stock, ready and anxious to rap the knuckles of every intruding hand. And what Arcadian rambles there were in the ancient and musty "City Hall" with its corridors and ante-rooms overflowing with the tide of harvest! There were the big pumpkins and potatoes, the bed-quilts fluttering from the galleries with the names of their workers or knitters—dames of an impossible old age—, pats of competing butter, bushels of gorgeous fruit. It will be only an act of tardy justice if I can bring you anything worth your hearing now.

I shall put what I have to say under the general theme of Science in its relation to Agriculture. Much has been said and done to unite the two. It would be useless to assume that all the promises of the one had been kept or the expectations of the other answered. It would be as stupid to pronounce their union undesirable, and divorce the tillage of the soil from that systematic study of nature which has so marvellously quickened every other human industry. At least it is my wish to offer a few thoughts tending toward that conclusion.

The farmer, in the common language of the day, is chief among the producers of the world. The wealth of cities, the revenues of states, the might of kingdoms are most of all his work. But he originates no force. He harvests and stores up force by wisely directing the great currents of power that flow

around him. For him the sunlight builds its golden bridge to earth, for him the subtle elements of the soil are shaken from their combinations in the rock. For him the clouds are gathered and the dews distil. Among these powers, from the frosts of March to the stiffening ground of November, he has to guide the growth of what he cultivates. He is almost invisible among these vast natural forces like the steersman on a steamer's deck; yet it is the part of his skill to control them all.

I called the farmer a harvester of force. His chief ally is vegetable life. This life he scatters dormant in the seed, itself the concentration of a culture which has gone before. A seed, like a grain of corn or wheat, is a wonder to the thoughtful mind. It is the cradle of a plant whose first leaves, wrapped around its tiny form, are charged with nourishment for its first growth. Buried in the ground, and starting with ambitious haste for an existence in the light, it becomes Nature's darling; for sun and showers, heat and electric thrills, the universal ministries, become its servants. They will all give of their wealth, all will be represented in the grain whose fulness makes the Autumn glad.

It is not too much to say that the history of a single spike of corn or wheat-ear involves as much profound and patient science before it can be fully told as the physical history of a man. So numerous and complicated are the forces and their relations, so curious is their modification by what we call the principle of life, that the comparison is fair. What is as yet understood is but a splinter from the tree. The Physiology of Plants is a great science and widening like a rushing tide, but its mysteries outnumber its revelations. How to renew or prepare soils has been a subject for the profound and numberless experiments of Chemistry, but Nature, the best chemist, works as yet with locked doors. The weather like the wind bloweth where it listeth, in spite of all human attempts to compel its secrets. Still it seems plain that in the future, among the keener agricultural competitions or

the teeming population of an older world, success will lie in the more thorough knowledge of the laws which govern and the elements which feed all vegetable growth.

It is not to be implied from this that the farmer is to be what the world denominates a man of science. Perhaps he has more real science now than he might see his way clear to admit, as Moliere's man had all his life been talking prose without so understanding it. Perhaps he will remain to the end the plain and simple man of experience and practice. But what it is right to expect from the farmer, if he shall not remain a hopeless conservative, as the stand-still East yet scratches its fields with the wooden plough of two thousand years ago, is *mental hospitality*. By this I mean a willingness to learn what may profit his own vocation, at the hands of those who explore with analysis or microscope the laws of the universe in which his lot is cast. It is a shame that an unfair suspicion of science has been awakened in his mind by the impostures and knaveries of designing men. His gains are too hardly won from the acres to which his toil is given to lie at the mercy of the charlatans who invade the country with specifics or patents, too loudly heralded and impudently pushed to be worth the purchase. Science, half-understood and crudely applied by men who are ambitious for riches at the farmer's expense, may well excite his indignation and scorn. His inheritance of common-sense is not for nothing here. Yet the same principle will tell him that all truth must have its practical application. What was a scientific toy thirty years ago, to-day records in instant signals the markets of the distant West or England upon which hang the prices of his crop. What was counted a madman's dream in Elizabeth's time, now urges the steamer, deep with grain or flour, across the Atlantic waves. The intimate knowledge of a single cereal or tuber or root may supply to him the key to an improved subsistence and a brighter home. The plea is then for an intelligent hospitality of mind,

contributing by its hearty sympathy to the sustaining or development of that scientific culture which may in the future be invoked for such material aid.

Nor is this plea disposed of by the wit which aims its jests at the "fancy farming" of the day. A rich man may toy with farming as he might with manufactures or with trade. There is in all of us a love of the soil, a pleasure in seeing the growth of things which our own hands have planted; and it is not surprising that this feeling finds an expression in the case of many who suppose that wealth and theory and science will answer for all. Perhaps also that other trait not unknown in human nature comes into play, where one fancies that he can best do that for which nature has expressly disqualified him. At any rate, these fertilizers costly as gold duston the soil, these potatoes absorbing every one the value of an able bodied man's long day, these cattle fed upon the fat of the land and making beef too great a luxury for even a millionare's table, are worth laughing at, if we remember that a "fancy" manufacturer or tradesman might be as absurd a sight without destroying the dependence of both trade and manufactures for their best attainments on the classified results of progressive knowledge. One thing is certain—a farmer must be made upon the soil. He must learn his business there, not among crucibles and books. But every agricultural journal with which he solaces his leisure, every glimpse of improved methods which he catches at the neighborhood store or the County Fair, appeals to his intelligence to see how science gathers the materials for future success out of even the humiliating failures of "fancy" farming to pay its way. Even if he goes as ages before his predecessors went to the barn-yard for his only means of renewing the vigor of his land, he may learn that it is the very province of a chemistry, itself more refined and savory than its organic subject, to teach him the only or the best way to preserve or apply the full value of his stable product to the ground.

Wilson Flagg, whose books should be among the choice reading of every intelligent New Englander, has embodied in his sketches of the Woods and By-ways of Massachusetts, the most tender and delicate love for the beauty of our familiar countryside. But he takes issue with scientific farming as that agriculture organized for gain alone which drives the muses from every haunt and gives a prosaic and uninspiring character to life. He shudders at the prospect of the day when the farm shall be only as the cotton-mill, spiritless, busy, cold. But it is not scientific farming after all, which he denounces as destroying every wayside covert for the smaller birds, grubbing up every forest on the slopes of the hills, and setting mechanical fingers only at work in the rural industries of the land. For perhaps the highest sweep of agricultural science will be in detecting and explaining the balance of the forces among which the farmer works—the wild spontaneous lives of nature and the other lives over which human effort broods. Science, like Providence, will note a sparrow's fall, and will judge the value of a tree for other things than timber or fuel. Where half-science sees but one method of action and unsettles and disturbs, a later and fuller knowledge will set itself the task to readjust the harmonies which have been broken in its own name.

I shall ask your attention to several specific illustrations of my leading thought thus outlined. To begin at a point not often touched, it must be in the power of Science to render substantial benefit to Agriculture because Agriculture enters nature as in some sense a disturbing force. The cultivation of a country is the destruction of its old balance of conditions, the harmony established, it may be, by uncounted centuries.

When our forefathers first sailed into sight of these familiar shores, Nahant was a wooded promontory; and the Salem hills, which are so bleak and bare to-day, were rounded with the deep verdure of their ancient trees. Where dry pasture is, the damp

forest mosses carpeted the ground; and streams, long since vanished or dwindled to a thread, sought the sea. The climate was less capricious; the beautiful Indian Summer flung its week of misty gold into November's lap; and even the Winter snows were true to their appointment of advent or departure. The pioneer's axe opened the soil to the sun, and his plough prepared the way among the stumps for the grasses and grains of the old world. It was inevitable that all should change, as it had done in Europe and Asia so long before. The farmer here, as everywhere, was to pursue his toil in the face of difficulties of his own creating. Thoreau, in his rough Walden bean-field, expressed the general fact of Agriculture: "This was my curious labor all summer—to make this portion of the earth's surface, which had yielded only cinque-foil, blackberries, johnswort and the like before, sweet wild fruits and pleasant flowers, produce instead this pulse,—to make the earth say beans instead of grass." This struggle was complicated for our predecessors and for us by the unsparing drafts which nature had to meet.

No science can give back the past. That would be to surrender the land to be the Indian's hunting-grounds again. But it can and it must improve our agriculture by reviving such of the old conditions as will put nature more in alliance with the farmer's work. New England husbandry will never be exactly the same as that of the rich plains behind the dykes of Holland or that whose leaves are dewy with the warm vapors of an English sky. But it will be the husbandry of a soil less sterile and more hospitable in just the proportion that the farm goes to school to science, and learns that even after years of neglect, nature may still be recovered as a friend. A wise combination of intelligence, under the direction of only what is certainly established by science now, for the purpose of recovering some of the lost values of climate and growth, would make any district—even your own, so proud of its advanced culture— vastly more pro-

ductive as well as beautiful. Economy would follow in the track of wealth and grace. The age of labor-saving machines would come to understand that the best of these are natural influences themselves.

You can see from the special turn I give this theme that I do not believe that the destiny of New England is to cede the hands that guide the plough to manufactures, and to reckon, in another century, her agriculture as a lost art. I love the joy of her country side too much; I honor too profoundly her moral and political strength in her rural communities, to think approvingly of such a change. I prefer to look for an age when sweeter compensations of rustic life shall surround the feverish excitement of our cities; when stronger attractions shall retain our youth upon the soil; when, amid richer acres and fairer homes, our farmers, who have most of all given pledges to loyalty by joining their fortunes to their mother earth, shall hold with stronger hand the traditions of liberty; but I only dare to speak of this as possible through that wide culture in which science bears its part.

Again, I specify the help which science renders to the farmer by enabling him to meet successfully the pests and scourges let loose by the animal or vegetable world upon his crops.

The husbandman has indeed many races to run with the hosts of nature in harvesting his season's work. A myriad of unbidden guests are hungry for it; green or dry, in the bud or fruit, it never comes amiss to their ravenous jaws. Insect armies migrate across a continent, leaving a desert as they go. The air is dusty with disease to the growing grain, as sometimes with pestilence to men. Ever since the day when sacred prophecy interpreted the locust swarms as the wrath of God, agriculture has had to fight for its own. And it is here that the eager curiosity which loves to explore the forms and laws of every life, though that life may only be a microscopic point, or a noxious and loathsome thing, does good service to the cultivator of the

ground. It teaches him to crush the evil in the cradle or the egg. It puts it in his power to pit one enemy against another, fighting fire with fire. It hangs upon some slender thread of habit in the movements of a depredator the foil to his attack. Some of the classics of science, like the well known volume of Dr. Harris here in Massachusetts, have been written in the interests of agricultural success.

Endowments from a state or nation to promote such studies,—the work of individual investigators or agricultural departments,—are all liable to a double misapprehension. Upon one side it seems so absurd to pension Entomology! a science which may be fascinating to a few harmless zealots, with net in hand to capture, and Latin and Greek lexicons within reach to name, their victims; but which even more than any other pursuit impairs the popular respect for a person's sanity. It is so easy to ridicule such things, and wail for money wasted on this sand. It is not here alone that men are blind to the enlargements of their own interests. Within the last dozen years, a prominent member of our American Congress, mentioned more than once for the highest office in the people's gift, labored in his place to oppose our national Coast-Survey—because he was a western representative and Illinois and Minnesota were out of hearing of Atlantic waves. As if the great west had any other highway for the exportation of her products than the sea, whose gates were watched and guarded by the very instution which he scorned! Meanwhile the grasshopper devours a dozen agricultural departments every month, and the beetle asserts the honor of the striped uniform by spreading terror from Colorado to Massachusetts. Surely science is worth a larger endowment than she has ever dared to beg, if she can help us here.

Another misconception comes from the old impatience of the world at the tardiness of results. To borrow a figure of a vigorous writer, we are too fond of digging up our hopes to see if

they grow. We expect too much, and that too soon, from our few experiments in the cultivation of economic science. Such expectations are apt to end in the putting foward of ill considered theories and hasty suggestions, alike dishonorable to science and injurious to the popular verdict upon its worth.

By a publication made in England while this address was in preparation, I can illustrate this branch of my subject by a noteworthy instance of a most delicate and abstruse method of research in Botany yielding the practical results which have long been sought for in the agriculture of two continents. The microscope in its most modern and powerful form, is now in constant use for the minute examination of the invisible structure of animals and plants. Many things which live, and are powerful by their numbers, are individually only to be recognized or described under the lens. Their germs, which are smaller still, contain in their structure and development the secret of their bane or blessing to the world. It is a chamber most obscure and far removed from practical life, as your first thought might say, which is here unlocked by the optician's art. Yet the microscope has just achieved an honorable fame from the value of one of its revelations.

The potato murrain, as English authors call it, has for some time been a most dreaded pest in Europe and America. Dark spots upon the leaves, foliage and stems blackening and decaying, the tuber corrupted by the same hidden cause and dissolving in a fetid slime, these are the well known symtoms of the disease. The evil has been found to be a delicate white mould—whose threads mine and exhaust the plant. Such moulds are among the worst precursors of pestilence or famine. They are more fearful than the devouring fire. They belong to a class of plants called Fungi, parasitic destroyers all, the scavengers of the vegetable world. It is such a mould as you may see in Autumn, at once the murderer and shroud of the flies dead upon

the window pane. Other fungi, not indeed of the special forms of mould, are the "rust" or smut of cereal crops. The remaining difficulty, after the discovery of the potato-mould, the *Peronospora*, was to understand the full process of its reproduction. Winter, on theory fatal to the life of any ordinary form or germ of the potato-fungus, only laid the chill of a brief interruption on its devastating work. There must be, so botanists said, some secret retreat of vitality, some conserving organ or seed, out of which the Spring called the evil powers into activity again. The riddle has just been read by Mr Smith, an English botanist of some repute.

In the stems and corrupting fragments of blighted potato plants, and under the dissolving influence of the Autumn rains, very small brown grains or spheres have been found, developed on the mould-threads just as these are ready to die by frost. This is the preparation of the parasite for Winter. Everything else perishes. The mould and its dead host, the potato, crumble away. The little spheres, only the thousandth of an inch in diameter survive, waiting patiently in the frozen ground. In the spring they thaw and sprout, taking possession of other plants in the same soil. The microscopist I have named is the first to detect and expose this wonderful resource of the short lived but destructive mould. It now becomes possible intelligently to press to extermination this pest, as others, like the vine mould and the wheat rust have had their ravages curbed before.

This instance may stand for many, all teaching the same lesson. Even the most refined investigations of science may have their practical value. The steel-maker has found a help in the "bright lines" of the spectroscope, and a jury searching for blood-stains have learned to interpret its "absorption bands." So the farmer of the future will, in common with all earth's workers, subsidize science for protection and defence.

Your patient attention to what I have said deserves its reward in the termination of these remarks. I observe, in the last place, that science promises to agriculture benefits in the development of the noblest crop which any soil produces,—the manhood upon which the state builds its best, and on which in our own land the intelligent preservation of our liberties depends.

You do not care, I presume, to listen to any extravagant eulogies of the farmer's place in the social world. Your work is hard, your gains slow, in comparison with other occupations, whose charms, often delusive, keep the tide from country to city ever on the flow. Some of you have felt a vague discontent with fortune, which has bound you to the homestead acres. Ah well! there are many more, and successful ones too, as the world goes, who envy you the narrow compass of your cares, the cooler and serener air in which you toil. But aside from feeling, it is a solid fact the state has learned to expect much of you. For common-sense to balance mad theorists, for economy to rebuke luxury and extravagance, for the wise conservatism of property in land as the needed counterpoise to reckless revolutionaries you are held responsible. The simple institutions which lie at the foundations of the fathers' government survive best among you. More earnestly perhaps than any other class you discuss and settle for yourselves, with no lack of independence, the great questions of the day. More than the vagrant dwellers in cities, you urged to its decision the national verdict against social wrong, and when the call came you filled the army's ranks. Strong, liberty-loving men it is your duty, as your tendency to be. It is not likely that the youngest child of to-day will ever see the time when the republic will not totter to its fall if you are less than this.

It seems equally certain that the education of the coming age will be largely scientific. This influence will reach the agricul-

tural world in many ways. Through the common school, through the modification of farm implements and methods, through the public press. It will act, with its unsettling power, here good, here evil, on forms and institutions. The intelligence which it will devolop may not always be a blessing—it may even strike savagely at the very restraints which are needed to make it a blessing. Our hope must lie in great part with you,—with the agricultural communities which invest the great centers of industry with the verdure of fertile soil and the homes of cheerful labor. Science will aid you who come nearest to nature to come nearer still. A wholesome pride in your profession, a more thorough knowledge of the laws among which it works, continually increasing skill to alleviate its hardships and increase its comforts, all this you may expect it to give. In short, it will give more power of being independent, happy, wise. You will not be the dwindling estate of the realm, whose golden age is over, but treasury, bench, executive will more and more respect and honor you. It is only necessary that you cherish that self respect which is ever ready to incorporate with the elements of daily life all that increasing knowledge shall suggest to make it better.

I cannot end without the word of commendation which it would be both unjust and discourteous to withhold. You show us that our old historic country is touched by no barrenness or neglect. Skill multiplies her productive forces and brings from her harvest fields their lavish wealth. It is still certain that her rustic homes are rich in graceful and housewifely art. Could we visit them, we should find them wise with the old thrift and more beautiful with the new grace. But your Fair Grounds and Hall indicate more than this. They show that you are growing more and more into the acceptance of the profession of agricul-

ture as a permanent, excellent, exalted art. In this it would seem that in you are answered the hopes of those who won and opened these fields at first. They have come to you as the long inheritance of peace,—You are to do your life-work upon them,—there is some green corner among their flowers where at last you will be laid to sleep.

# THE CATTLE SHOW AND FAIR.

The Fifty-Fifth Annual Cattle Show and Exhibition was held at Danvers, September 28th and 29th, 1875.

# REPORTS, &C.

## FAT CATTLE.

The Committee on Fat Cattle beg leave to report that there were six Fat Oxen offered for premium, all of good quality, and but three premiums at our disposal to satisfy their demands. Had not the rules of the Society stared us in the face, we should have awarded a premium to each pair and thereby rendered equal justice to all. But to obey the rule, which we were bound to do, we were obliged to award two premiums to one pair and thereby leave one pair out in the cold which were really deserving a better fate.

Hoping that the Trustees will change the rule, so far as Fat Cattle are concerned, we postpone further suggestions for the present and tender the result of our deliberations.

Henry Gardner, Peabody, for best Ox, first premium, $12; William A. Russell, No. Andover, second premium, $10; Hen-

ry Gardner, Peabody, third premium, $6. We would also recommend a gratuity of $5 to S. & N. Longfellow of West Newbury for their pair of oxen.

Committee—J. Longfellow, J. P. King, H. C. Harnden, G. E. F. Dane, Jas. T. Carlton.

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## BULLS.

There were, in all, 14 entries in this class. The premiums have been awarded as follows:—

Two-years-old and upward, thorough-bred Ayrshire, T. O. Wardwell, No. Andover, first premium, $12, for Sir Thomas Moore, 1469. Calved July, 1870. Bred by J. N. Fleming, Knockdon, Scotland, and imported by Wm. Rodden, Montreal.

N. P. Proctor, Danvers, second premium, $6, for Punch, 1391 Sire, Chief, 474. Dam, Cowslip, 1022, imported.

Two-years-old and upwards, thorough-bred Jerseys, J. Longfellow, Newbury, first premium, $12, for Little Micawber, Sire, Mr. Micawber, imported by Thomas Motley. Dam, Snowdrop, imported by Thomas Motley.

Two-years-old and upwards, thorough-bred Short-Horns, Shattuck Brothers, Lawrence, first premium, $12, for Merrimac, weight, 2008 lbs. Calved June, 1871. Got by Amateur.

Dam, Elizabeth Poole, by Butterfly, 3d.

G " Lilly, by Fortune, 11487

G G " Sophia, by Napoleon, 1905.

G G G " Dolly, imported by Jonas Whittaker in 1837.

Amateur was bred by J. O. Sheldon, Geneva, N. Y. Got by 7th Duke of Airdrie, 23718.

Dam, Juliet, by Duke of Airdrie, 12730.

G " Jubilee 3d, by E. C. Hakin, 2813.

G G " Jubilee 1st, by Lycargus, 7180, and so on for eight generations of ancestors besides those mentioned.

Two-years-old and upwards, thorough-bred Holsteins, William A. Russell, No. Andover, first premium $12, for "dictator."

Under two-years old, William A. Russell, No. Andover, first premium, $6. for "First Consul." Second premium, $4, to same for bull calf "Fritz Clifden."

"Dictator," 82, "First Consul," 100 and "Fritz Clifden," 102 were imported by Mr. Russell from North Holland in 1874.

The Committee are sorry to report that they were unable to give premiums to a number of Bulls, which were disqualified on account of defective pedigrees.

The State Board of Agriculture has declared that no Agricultural Society shall recieve the state bounty where premiums are given to other than thorough bred bulls, and the President and Secretary are obliged to hand in a sworn statement to that effect before the money is paid into its treasury.

Now, if the Board would go a step farther and define a thorough-bred bull, they would confer a favor on all judges in this class and would relieve the consciences of the officers of the Society in swearing, often unwittingly, to false statements—for the reason that some judges are ignorant of what a thorough-bred animal is. If the board will not do this, then the Societies ought to establish some rule for the guidance of their Committees.

What is a thorough-bred animal? That is a question more easily asked than answered, but for all that there is nothing to prevent a Society from adopting some regulation on this point and then asking the Board for its approval. There are certain Herd Books of the different breeds, which are considered by high-toned, honest breeders as authority in all matters of pedigree.

Shall the Society declare that only such bulls as trace their pedigree to these books shall be eligible to a premium, or shall it adopt the principle of the English Short-Horn breeders that

five crosses of thorough-bred blood for a bull, and four for a cow are sufficient to place them in the ranks of thorough-bred stock?

If neither of these plans should meet the approbation of our Society, will it not publish, in the next Schedule of Premiums, some definition of a thorough-bred animal? only let it be so clear that no judge hereafter will have any excuse for giving the premium to other than a thorough-bred bull, on any plea of ignorance.

In judging of the bulls entered for premiums this year, your Committee were governed in their decisions by the authority of standard Herd Books, or by the knowledge of direct importation, as in the case of the Holsteins.

Sir John Sinclair, in his "Code of Agriculture," says "the art of improved breeding consists in making a careful selection of males and females for the purpose of producing a stock with fewer defects and with greater perfections than their parents: in which their mutual properties shall be combined and their mutual faults corrected.

The objects of improved breeding, therefore, are to obviate defects and to acquire and to perpetuate desirable properties; hence, when a race of animals have posessed in a great degree, through several generations, the properties which it is our object to obtain, and any tendency to produce unwished for properties has been extirpated, their progeny may be said to be well bred, and their stock relied on.

Wise words these though written more than fifty years ago; but as much to the purpose as if spoken for the first time today.

The object of improved breeding is not merely the coupling of a cow with a bull, but the making a careful selection for the purpose of perpetuating good qualities and eradicating defects. The art of breeding is the understanding how to do this.

How many men before deciding the important question of selecting a bull for breeding, consider the virtues and faults of their own cows? Do their cows need a hardier constitution? Are they too lank and leggy? Do they need increase in size of body? Do their udders need developement in certain directions where they are now deficient? Are such questions asked and weighed deliberately?

We fear that less care and judgement is used in these matters than in many others of less importance.

Sinclair uses the term well bred. Now it seems to us that there is some distinction between a well bred and a thoroughbred animal. Every thorough-bred animal is not a well a bred one. Other things being equal, we would always select the animal with the longest pedigree, because we believe in pedigrees, which are the result of judicious breeding, but to say that the beast with the longest pedigree is the best, is as sensible as to say that the longest tail is a sure guide for selection.

Before purchasing a bull, one should know something more than the mere fact of his having a pedigree—we should know that it is a good one, that is, tracing to a line of ancestors having such qualities and characteristics as we wish to introduce in to our herds.

Different families of the same breed often vary materially in quality—for pure-bred cattle may be improved or deteriorated according to the judgement of the breeder—therefore we say be careful in choosing animals for breeding purposes that they are not only pure bred but well bred.

Mr. Pringle, Editor of the "Irish Farmers' Gazette," remarks that "It much to be regretted that careful selection, especially in case of the males, is not so closely attended to by many breeders of the present day as it ought to be. Bull calves are not un-

frequently kept for breeding purposes, chiefly because they have fashionable pedigrees, rather than their merits, considered merely as breeding stock. Of course such bulls sell, for the pedigree sells them: but however important a pedigree is—and it is a most important point—still a fashionable pedigree will not make up for decided want of merit in a bull."

This does not prove that pedigree is not an important point to be taken into consideration in the selection of breeding stock; it merely proves that occasionally, and in spite of a long line of good blood, an animal will crop up, which does not posess sufficient merit to render it desirable to retain that animal for breeding purposes. From this we see that an animal should not only be of good blood, but should have sufficient merit of its own to warrant us in purchasing for breeding purposes.

Notwithstanding Sinclair's statement that the stock of well bred animals may be relied on, it is not invariably true, as the occasional cropping up of worthless specimens shows.

As I have said before, a thorough-bred animal is not necessarily a well-bred one, so likewise a well-bred animal is not always a meritorious one.

Sometimes a farmer buys a thorough-bred bull because he happens to be cheap. He may be a "weed," which the breeder was only too glad to dispose of, or he may per chance be a good animal. He is taken home, half starved, allowed to do service not only for the farmer's cows but for all others in the neighborhood. His calves, when they come, are fed just enough to keep them alive and consequently grow up looking very scraggily. The farmer, not seeing the expected improvement, begins to cry down pure-bred animals as humbugs. Now, in the first place, it was a chance if he got a decent bull—provided the animal was good, he did not care for him properly. In the second place, the cows may have been such a kind and in such a condition

that no fœtal improvement could take place, and, thirdly the calves did not have a fair chance after they were dropped. Under these circumstances should a reasonable person look for improvement.

On the other hand, a man may buy simply on account of a long pedigree, tracing perhaps directly to importation, and pay enough to get a good bull, but has not attempted, or has not been able, to ascertain the qualities and characteristics of the animal's ancestors. His herd is well fed and well cared for; but still the results are not as good as anticipated, because a bull had not been selected for the purpose of "obviating defects and perpetuating desirable properties."

Mr. Carr, in writing of Thomas Booth, says he "appears to have proceeded on the principle that whilst the general similitude and mingled qualities of both parents descent to the offspring, the external conformation—subject of course to some modification by the other parent—is mainly imparted by the male and the vital and nutrrative organs by the female.

Having judiciously selected the best animals procurable of both sexes, Mr. B. was careful to pair such, and such only of the produce of these unions as presented in a satisfactory degree the desired characteristics with animals posessing them in equal or greater measure, and unsparingly to reject, especially from his male stock, all such as were not up to the required standard.

Mr. Bates and others followed the same system in perpetuating characteristics which they considered desirable. Guided by this rule, Mr. Booth, one of the most celebrated breeders of Short-Horns in the world, built up his magnificent herd.

In the first place, he selected the best animals that could be procured; but he was not satisfied with this alone. In the second place, he used the greatest care that only such animals as

presented the desired characteristics should be coupled, and. thirdly, he rejected unsparingly, especially from among the males, all animals that did not come up to his high standard. Lord Rivers, a successful breeder of greyhounds, attributed his success to his rule of "breeding many and hanging many," and with cattle, though not in the same degree, there will always be some animals which are only fit for the butcher. It is upon this important point of knowing when it is necessary, and then daring to use the knife that the success of a breeder in a great measure depends.

In selecting a bull for breeding purposes we have said that he should not only be thorough-bred but well-bred, and moreover he should have merits of his own.

Let us see what some of those merits should be in a dairy breed. Thaer, in speaking of the choice of males, says that "most breeders are too much guided by certain conventional beauty of form, which in many cases is not really the most desirable characteristic," and again, "that a broad front is much valued by some persons; for my own part, I prefer that the animal's hind quarters should be in good proportion to the front. First, that when he leaps the cow, he may be able to keep himself up without pressing too heavily upon her, and secondly, because a strong croup appears to favor a large secretion of milk —I likewise prefer a bull with a long and fine head and thin tail but my chief care is to select one that is the offspring of a good milch cow.

This last sentence shows that he considered it of greater importance than anything else that a bull should be descended from good milking stock—that is well-bred—but among the characteristics, he places a strong croup most prominently

Some of the points, as laid down by the Royal Jersey Agricultural Society, for a bull, would be applicable to any dairy

breed, and we give them as follows :—

"Horns smooth, not too thick at the base ; ears small and thin and of a deep orange color within ; eye full and lively ; neck arched, powerful, but not too coarse and heavy ; chest broad and deep ; back straight from the withers to the top of the hip, and straight from the top of the hip to the setting on of the tail ; the tail at right angles with the back, fine and hanging down to the hocks ; hide mellow and moveable, but not too loose, covered with fine, soft hair ; fore legs short and straight ; fore arm large and powerful, swelling and full above the knee and fine below it ; hind legs short and straight (below the hocks) and bones rather fine ; the hind legs must be squarely placed and not too closely together when viewed from behind nor to cross in walking." Moreover the pelvis should be long, broad and straight ; hook-bones wide apart, that is a good croup. A proper regard should also be paid to a well developed escutcheon and the indication of teats is also desirable."

We do not believe that a bull should have a decidedly feminine appearance ; but should show sufficiently that masculine character which is inseperable from a strong and vigorous constitution.

J. D. W. FRENCH, Chairman.

No. Andover, Oct. 11, 1875.

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## MILCH COWS.

The Committee on Milch Cows report as follows :—

BEST MILCH COW.

George B. Dodge, Hamilton, fiirst premium, $25 ; E. Swazey, Danvers, second premium, $12 ; Frederick Burnham, Manchester, third premium, $5.

AYRSHIRE.

Benj. P. Ware, Marblehead, first premium, $12, for "Rose, 2d;" Thomas Cass, Topsfield, second premium, $6, for "Susie."

JERSEY.

George W Russell, No. Andover, first premium, $12, for "Nellie Blen, 2d;" J. Bardwell, Beverly, second premium, $6, for "Daisy."

DUTCH OR HOLSTEIN.

Wm. A. Russell, No. Andovet, firsr premium, $12, for "Lady Clifden;" Wm. A. Russell, No Andover, second premium, $6, for "Lady Clay."

NATIVE OR GRADE.

S. F. Crossman, Swampscott, first premium, $12; George W. Frazier, Lynn, second premium, $6.

STATEMENT OF GEORGE B. DODGE.

HAMILTON, SEPT. 27, 1875.

TO THE COMMITTEE ON MILCH COWS:—I enter for premium for best Milch Cow, my Grade Ayrshire cow, "Star," calved March, 1867. She dropped her last calf Feb. 6, 1875, and is due to calve again December 31, 1875. Her feed, until turned to pasture, was the best of English hay and rowen, with two quarts of Indian meal and about a peck of roots per day; since the 20th of May, good pasturage. Commenced August 1st feeding one armfull of cornfodder in the evening and one quart of Indian meal in the morning. Commenced March 1st weighing her milk and weighed it until Sept 1st. her average during March was 38.8 pounds; for April was 40.2 pounds; for May was 38.2 pounds; for July was 34.1 pounds. Her record for the months of June and August. as required by the rules of the Society, is as follows;—

JUNE.

| DATE. | MORNING. | EVENING. | TOTAL. |
|---|---|---|---|
| 1 | 17 1-2 | 22 1-2 | 40 |
| 2 | 18 | 23 | 41 |
| 3 | 18 1-2 | 22 1-2 | 41 |
| 4 | 18 1-2 | 22 | 40 1.2 |
| 5 | 17 1-2 | 21 1-2 | 39 |
| 6 | 19 | 21 | 40 |
| 7 | 17 1-2 | 21 | 38 1-2 |
| 8 | 16 1-2 | 22 1-2 | 39 |
| 9 | 19 | 23 | 42 |
| 10 | 18 | 23 1-2 | 41 1-2 |
| | 180 | 222 1-2 | 402 1-2 |

AVERAGE WEIGHT IN POUNDS 40.25.

AUGUST.

| DATE. | MORNING. | EVENING. | TOTAL. |
|---|---|---|---|
| 22 | 14 1-2 | 16 1-2 | 31 |
| 23 | 14 | 16 | 30 |
| 24 | 14 | 15 1-2 | 29 1-2 |
| 25 | 14 | 16 | 30 |
| 26 | 14 | 15 | 29 |
| 27 | 14 1-2 | 17 | 31 1-2 |
| 28 | 13 1-2 | 16 1-2 | 30 |
| 29 | 14 1-2 | 15 1-2 | 30 |
| 30 | 15 | 15 | 30 |
| 31 | 14 | 14 1-2 | 28 1-2 |
| | 142 | 157 1-2 | 299 1-2 |

AVERAGE WEIGHT IN POUNDS 29.95.

STATEMENT OF BENJ. P. WARE.

I offer for premium my thorough-bred Ayrshire cow, "Rose," 2d, born March 5th, 1870, whose dam was "Rose," grand-dam "Marjary," imported by Joseph S. Cabot. Marjary was bred by John Kilgore of Notmine, Scotland, g. g. dam Lillias, bred by Mr. Kilgore, g. g. g. dam was bred by Captain Martin. Marjary's sire was Jamie, bred by Alex Arnold of Aucheneunie, the sire of Rose 2d was bred by E. S. Poor from a bull imported by

him. Rose 2d dropped her calf June 2d, therefore could not account for her milk the first ten days of June. The weight of her milk for the last ten days of August is as follows:—

| Date. | Morning. | Evening. | Total. |
|---|---|---|---|
| 22 | 19 1-2 | 20 | 39 1-2 |
| 23 | 20 1-2 | 20 1-2 | 41 |
| 24 | 19 1-2 | 20 1-2 | 40 |
| 25 | 20 | 20 1-2 | 40 1-2 |
| 26 | 19 1-2 | 21 | 40 1-2 |
| 27 | 19 1-2 | 18 1-2 | 38 |
| 28 | 20 | 19 1-2 | 39 1-2 |
| 29 | 19 1-2 | 19 1-2 | 39 |
| 30 | 19 1-2 | 20 | 39 1-2 |
| 31 | 20 | 21 1-2 | 41 1-2 |
| | | | 399 |

Allowing 2.15 lbs as the standard weight of one quart of milk, the yield would equal 185.12 quarts, averaging 18.5 quarts per day. Her feed has been as much green corn fodder as she would eat in the forenoon and turned out to pasture and water in the afternoon, with two quarts of shorts and one quart of meal morning and evening. Her milk, by the Lactometer, shows eleven and one-half per-cent cream.

STATEMENTS OF WILLIAM A. RUSSELL

"Lady Clifden" is six years old; Dutch or Holstein; imported; calved Jan. 28th, 1875 and is due to calve March 10th, 1876. Fed on three quarts meal and four quarts shorts with good hay. After June 1st, pasture and two quarts meal.

| | | | | | | |
|---|---|---|---|---|---|---|
| Averages for February. | 61 7-13 | lbs per day, | or | 29 3-40 | quarts. |
| Averages for March. | 67 7-13 | " | " | 32 | " |
| Last ten days in April. | 59 4-5 | " | " | 28 12-25 | " |
| " " " May. | 52 27-31 | " | " | 25 9-50 | " |
| " " " June. | 50 3-10 | " | " | 24 | " |
| " " " August. | 42 19-100 | " | " | 20 9-100 | " |

"Lady Clay" is seven years old; Dutch or Holstein; imported;

calved March 15th, 1875, and is due to calve April 8th 1876. Fed on three quarts meal and four quarts shorts with good hay. After June 1st, pasture and two quarts meal.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Last ten days in | March. | 63 3-95 | lbs per day or | 30 3-5 | quarts. |
| " | " | April | 57 1-5 | " | " | 27 6-25 | " |
| " | " | May. | 45 23-31 | " | " | 21 39-50 | " |
| " | " | June. | 37 9-32 | " | " | 18 7-10 | " |
| " | " | August. | 30 9.16 | " | " | 14 7-10 | " |

STATEMENT OF GEORGE W. RUSSELL.

I enter my Jersey cow, "Nellie Blen, 2d," 1148, A. H. B., calved August 17, 1870, making her five years of age, and bred by me; for the premium for the best milch cow of any breed, with satisfactory evidence as to her milk, manner of feeding &c. Nellie Blen, 2d, dropped heifer calf December 22d, 1874. January 1st, 1875, commenced to measure her milk and have measured it daily up to Sept 1st, 1875. During the winter she was fed on good hay with one quart corn meal and one quart cotton seed meal twice a day until the 20th of May, after which she had nothing but pasture feed until August 1st, 1875, since then two quarts meal daily. Due to calve Nov. 6th, 1875.

RECORD OF HER MILK.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gave in | January, | 627 quarts | 20 1-4 | quarts per day | | 1348 1-4 | lbs. |
| " | Feb. | 532 " | 19 | " | " | 1143 4-5 | " |
| " | March, | 558 " | 18 | " | " | 1199 7-10 | " |
| " | April, | 480 " | 16 | " | " | 1032 | " |
| " | May, | 465 " | 15 | " | " | 999 3-4 | " |
| " | June, | 450 " | 15 | " | " | 967 1-2 | " |
| " | July, | 379 3-4 | 12 1-4 | " | " | 817 | " |
| " | August, | 274 | 9 | " | " | 589 1-10 | " |
| | | 3765 3-4 | | | | 80873 | |

The above record shows a yield of 15.50 quarts daily for eight months.

STATEMENT OF S. F. CROSSMAN.

I enter my grade milch cow for premium. She was five years old in the Spring of 1875. Breed part Jersey and part Durham. Dropped her last calf in the middle of November, 1874, and then gave from eighteen to twenty quarts of milk. In June, 1875, she gave fourteen to fifteen quarts, in August nine to eleven, and at the present time, about four weeks previous to her dropping her next calf, she gives from eight to nine quarts. Since May, 1875, her feed has been ordinary pasturage and seven lbs of ground oats per day.

The Committee, in submitting their report, desire to say that the foregoing statements, with one exception, are all that came to their hands giving any information on which to base any judgment or to make any award. When the attention of exhibitors was called to the Society's rule, the reply was that they had not seen the book containing the rule and knew nothing about it.

Your Committee have awarded premiums in three or four instances where the statements were mainly verbal ones, but in which they were satisfied of their truth, and that the exhibitors were really ignorant of the requirement of a full written statement. They recommend that hereafter more effort be made to give information that every exhibitor for a premium must comply with the rule requiring a full, but concise, written statement as to the following facts, viz :—age, breed, time of dropping last calf, when will next calve, kind, quality and quantity of food during the season and the weight or measure of milk during the evening and morning of the first ten days of June and the last ten days of August, or of a like period in some other months if the cow is not in milk in June and August, and that Committees be instructed not to award any premium unless such rule is complied with.

*Committee*—John L. Shorey, H. G. Herrick, Wm. B. Carleton, John D. Cross.

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## HERD OF MILCH COWS.

The Committee on Herds of Milch Cows report that there were but two herds entered for premium—one consisting of six cows by Benj. P. Ware of Marblehead, and one of three cows by J. Bardwell of Beverly. Mr Bardwell exhibited three very fine looking Jerseys, but as the rules of the Society require the exhibition of *of at least five head* to enable the owner to compete successfully for a premium, Mr. Ware was actually the only competitor. In Mr. Ware's herd were some excellent specimens of milch cows, and to him the Committee recommend the award of the first premium of $18.

We suppose there is a two-fold object in offering this premium. First—to induce owners of good herds to exhibit their stock and thus add to the interest of our annual show, and, second—to elicit by the required statements reliable information respecting she manner and cost of keeping, and the income obtained. We think the latter a matter of very great importance. There has been much written of late regarding the profit of this branch of farming and this question is frequently discussed among farmers. It is pretty generally conceded by practical farmers in this region, that the margin of profit in the dairy is small, although a person is occasionally found who thinks the production of milk for the market a money making business. We do not propose to discuss this question, but would call attention to the need of more definite and exact information respecting this branch of farming. Very few persons really *know* how

much value their cows produce in a year, or how much value in food and labor is expended on them.

The dairy forms one part of the farm operations, and they may perhaps be able to tell at the end of the year, whether on the whole they have gained anything from the farm, but they cannot tell whether or not it would have paid better to have sold the produce consumed by the cows and bought a quantity of manure equal in value to that produced by the cows. Every farmer who keeps a herd of cows, or who thinks of doing it, would like to know how much money return he can reasonably expect to receive from such a herd of cows as is practicable for him to obtain. If our milk producers, who make this one of the means of living, would take the trouble to keep an exact account for a year or two of the yield of their herds, the amount received for dairy products and the manner and cost of keeping, it would be of the greatest value to many young farmers and not a little benefit to themselves. The vast difference in the income of different cows, without any perceptible difference in cost of keeping, would surprise us, and the result of careful observation would very likely show that in a herd of twenty cows a large portion do not pay expenses while the remainder yield a good profit.

It may be objected that keeping an exact account of the production of each individual in a large herd, would involve such an amount of labor as to be practically impossible. But we think not. Let the milk of each cow be measured or weighed one day in each week for a year, and the amount produced by each one in that time could be very easily calculated. The knowledge gained by trying this experiment is worth to the person trying it all the trouble it costs.

It would doubtless be found that a large proportion of cows do not pay expenses. But is not the first step to pecuniary success in dairy farming to ascertain how much a cow must yield to

pay a fair profit, and the next to find out which individuals of the stock are not doing it.

We want information too, respecting the income farmers of good judgment in the selection of stock actually do receive from such cattle as they can obtain, for it is utterly impracticable for a milk producer to buy a herd of cows which will all prove to be extra. And then the farmer, in deciding whether or not it is profitable for him to continue in this branch of his business, must extend his observations over a term of years. He must buy his cows and sell them before he can tell exactly how the account stands. If he buys extra stock for milk he must pay for that quality in the cow, and when her usefulness is ended he must expect to sell her for the sum she is worth for beef. If he has a large stock, he must must expect to lose an animal occasionally, and must constantly expect more or less loss from swelled udder or "garget," and hemust bear in mind that a large milker is more liable. to diseases of this nature than a cow yielding a moderate quantity.

Another point on which more definite knowledge is wanted is the feeding. Milk producers are not agreed as to the food best calculated for making milk. It is agreed that something must be fed besides hay, but whether shorts, fine feed, cotton seed, oil-cake, corn meal or roots is by no means settled. The comparative value of these different kinds of food for the production of milk is a matter on which few farmers have a well grounded opinion. It is claimed on good authority that cows can be kept much more economically, with equally good results, by giving "chopped feed," instead of feeding the same kinds of provender dry. We know farmers practicing this mode of feeding who think one fourth of the hay can be saved in this way, and the cows kept equally well. If this is true it is a fact well worth knowing and practising. On all these points farmers need more definite and precise knowledge which can only be obtained by careful experiment. The sum of it all is that in this, as in all other

operations of the farmer, it may not be very easy to ascertain exact financial results. But such a knowledge is essential to success especially in a business where the margin of profit cannot be large.

*For the Committee*, JOS. S. HOWE, Chairman.

STATEMENT OF BENJ. P. WARE.

I offer for premium my herd of six cows. They were fed through the winter with English hay and rowen with one-third bushel roots each per day. They all gave milk to within two or three weeks of calving, and calved between March 1st and June 2d. Their feed during the summer has been pasture, and since July 1st corn fodder in the barn in the forenoon, and in the afternoon turned into a small pasture with water and a feed of two quarts shorts and one quart Indian meal each morning and evening. Since the first of June they have averaged a little over thirteen quarts of milk per day each, ascertained by weighing their milk at different times and averaging it.

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## HEIFERS.

The Committee on Heifers have awarded the following premiums —

SHORT HORNS.

Ben Perley Poore, West Newbury, first premium, $6, for heifer "Lilly." Ben Perley Poore, West Newbury, first premium, $4, for calf "Daisy."

AYRSHIRE.

Benj. P. Ware, Marblehead, first premium, $6, for yearling

heifer "Miss Morris." Jas. Manning, Topsfield, second premium, $4.

JERSEY.

Geo. W. Russell, No. Andover, first premium, $6, for heifer "Hattie." Jas, S. Green, Hamilton, second premium, $4, for heifer "Daisy." Geo, W. Russell, No. Andover, first premium, $5, for Jersey calf. J. H. Cheever, Manchester, second premium, $3.

DUTCH OR HOLSTEIN. (IN MILK.)

W. A. Russell, No. Andover, first premium, $12, for "Lady Elswout." W. A. Russell, No. Andover, second premium, $6, for "Anna Paulowna."

DUTCH CALVES.

W, A. Russell, first premium, $5, for "Belle Marion." Second premium, $3 to same for "Jenny Clifford."

GRADE HEIFERS. (IN MILK.)

Albert W. Dodge, Hamilton, first premium, $12. E. Swazey, Danvers, second premium, $6.

GRADE HEIFERS. (NOT IN MILK.)

Peter Lynn, Danvers, first premium, $6. J. H. Cheever, Manchester, second premium, $4.

GRADE CALVES.

S. A. Merrill, Danvers, first premium, $5. Theron Johnson, No. Andover, second premium, $3.

Your Committee would also recommend a gratuity of $3 to J. W. Scidmore of Peabody for his twin heifer calves, and also would make honorable mention of the heifers of E. G. Berry, of

Danvers, Theron Johnson, of No. Andover, Albert W. Dodge, of Hamilton, and another heifer supposed to belong to Mr. Gustin of Danvers.

*Committee*—Herman Phelps, A. M. Bodwell, H. F. Longfellow, Z. C. Wardwell, J. F. Knowlton.

STATEMENT OF BENJ. P. WARE.

I offer for premium my thorough-bred heifer, Miss Morris, 5th, born May 30, 1874. Her dam was Miss Morris, 3d, grand dam Miss Morris, imported by Sanford Howard Esq. for the Mass. Society for the promotion of Agriculture. Sire, General, bred by Dr. Geo. B. Loring, he by Cabot 3d, Dam, Jessie, 107. Her feed last winter was English hay and roots. This summer, corn fodder in the forenoon and pasture in the afternoon.

STATEMENT OF JAS. B. GREEN.

Heifer, Daisy. Dropped March 20, 1874. Dam, H. B. M. Consul, imported by T. Louisada. Sire, Prince Albert, H. B.

STATEMENT OF GEORGE W. RUSSELL.

I enter my yearling heifer, Hattie, squirrel gray—nearly solid. Dam, Sultana, 403. Sire, Bruno, 307. Dropped May 22, 1874.

STATEMENT OF ALBERT W. DODGE.

I enter for the premium, given for the best milch heifer, my Jersey grade heifer, Tabby. She was calved in May, 1873, and dropped her first calf May 10, 1875, and is due to calve April 30, 1876. Her keeping has been good pasturage through the season. August 1st commenced feeding one quart corn meal in the morning, and August 20th commenced giving one quart shorts in addition. Her extra feed, since September 1st, has been potatoes once a day.

RECORD OF HER MILK, (IN POUNDS.)

JUNE.

| DATE. | MORNING. | EVENING. | TOTAL. |
|---|---|---|---|
| 1 | 13 1-2 | 14 | 27 1-2 |
| 2 | 13 | 14 | 27 |
| 3 | 13 | 15 | 28 |
| 4 | 13 | 15 | 28 |
| 5 | 13 | 14 1-2 | 27 1-2 |
| 6 | 13 1-2 | 14 | 27 1-2 |
| 7 | 12 1-2 | 14 | 26 1-2 |
| 8 | 12 1-2 | 14 1-2 | 27 |
| 9 | 12 1-2 | 15 | 27 1-2 |
| 10 | 11 1-2 | 15 | 26 1-2 |
| | 128 | 145 | 273 |

AUGUST.

| | | | |
|---|---|---|---|
| 22 | 9 | 11 | 20 |
| 23 | 9 | 11 | 20 |
| 24 | 10 | 11 | 21 |
| 25 | 10 | 12 | 22 |
| 26 | 10 | 11 1-2 | 21 1-2 |
| 27 | 10 | 12 | 22 |
| 28 | 10 | 12 | 22 |
| 29 | 10 | 11 1-2 | 21 1-2 |
| 30 | 10 | 12 | 22 |
| 31 | 10 | 11 | 21 |
| | 98 | 115 | 213 |

STATEMENT OF W. A. RUSSELL.

Description of the 4 Heifers and 2 Calves entered by W. A Russell,

Maid Marion; 3 years old. Imported in October, 1874, calved for the first time Jan. 28th, 1875, is due to calve July 1st, 1876. Feed from February to June two quarts meal, four quarts shorts and good hay. After June 1st, pasture only.

| | | | | | |
|---|---|---|---|---|---|
| Average milk | per | day | for February, | 19 | Quarts. |
| " | " | " | March, | 19 19-100 | " |
| " | " | " | April, | 17 31-50 | " |
| " | " | " | May, | 16 27-100 | " |
| " | " | " | June, | 16 2-3 | " |
| " | " | " | July, | 15 41-50 | " |
| " | " | " | August, | 14 | " |

Lady Paulowna; 3 years old. Imported in October, 1874 was giving milk and continued milking up to calving. Calved July 21st, second calf. Average milk for August, 16 quarts, for September, 14 1-2 quarts. Feed, pasture only.

No. 160, Lady Elswout, H. H. B., Vol. 2. Black with white points. Calved October 20th, 1872. Bred by and the property of W. Russell, Lawrence, Mass. Sire Elswout, 94, imported from North Holland by T. E. Whiten in 1871. Dam Midwoud, 5th, 28, by Zuyder-Zee, 2d, 57, grand dam Midwoud, 4th, 26, by Hollander, 19; great grand dam, Lady Midwoud, 17, imported from North Holland by Winthrop W. Chenery, Esq., in 1861. Calved July 22d, 1874, is to calve June 14th, 1876.

| | | | | | |
|---|---|---|---|---|---|
| Average milk | per | day | for August, | 11 1-2 | Quarts. |
| " | " | " | December, | 9 | " |
| " | " | " | April, | 7 1-2 | " |
| " | " | " | August, | 6 1-2 | " |

Berenice; 2 years old. Imported in October, 1874, calved March 12th, 1875, is to calve April 10, 1876. Feed two quarts meal and four quarts shorts up to June, after that, pasture only.

| | | | | | |
|---|---|---|---|---|---|
| Average milk | per | day | for April, | 12 | Quarts. |
| " | " | " | June, | 9 1-5 | " |
| " | " | " | August, | 8 | " |

Calf, Belle Marion, No. 96, H. H. B., Vol. 2. Black with white marks. Calved Jan. 28th, 1875. Imported in heifer, Maid Marion, 181, from Benningbrock, North Holland, in 1874, by and th e property of W. A. Russell, Lawrence, Mass.

Calf, Jenny Clifden, No. 151 : black and white. Calved Feb. 1st, 1875. Imported in cow, Lady Clifden, 159, from Midwoud, North Holland, by and the property of W. A. Russell.

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## WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers report that there were 19 pairs Oxen and 4 pairs Steers entered for trial, the largest number we think which has been on exhibition for many years, and generally of large size, good shape and well matched. But there was a deficiency in their training. If we could see one-tenth of the interest in training steers and oxen that there is in training fast horses, we might conclude that the use of oxen on the farm was not yet going out of date. It is a question of serious consideration for the farmers of New England whether it is for their interest to dispense with the use of oxen for that of horses.

The Committee award, for Working Oxen, to A. H. Gould, Topsfield, first premium, $15 ; W. A. Russell, No. Andover, second premium, $12 ; Charles P. Preston, Danvers, third premium, $10. Steers ; Asa T. Newhall, Newburyport, first premium, $10 H. C. Ware, Salem, second premium, $6.

*Commitee*—Paul T. Winkley, Alden C. Estes, D. Bradstreet, P. W. Ricker.

## TOWN TEAMS.

The Committee on Town Teams report 22 pairs of Oxen on team of the Town of Danvers, 20 pairs Oxen on team of the Town of Topsfield, 13 pairs Oxen, including 1 pair of Bulls, on team of the Town of Andover.

Also, an 8 Horse team and a 16 Horse team of Danvers.

The Committee award premiums as follows :—

To the Danvers Ox Team, (22 pairs) first premium, $30.00
To the Topsfield Ox Team, (20 pairs) second premium 15.00

The Andover Ox Team had some fine cattle, wish we had a premium for them.

### HORSES.

To the Danvers 8 Horse Team, first premium, $30.00
To the Danvers 16 Horse Team, second premium, 15.00

*Commitee*—Thos. P. Gentlee, David Knowlton, Benj. E. Emery.

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## STEERS.

The Committee on Steers report the following awards :—

Three-years-old, Romulus Jaques, West Newbury, first premium, $8 ; S. & N. Longfellow, Groveland, second premium, $6.

Two-years-old, George F. Mason, Andover, first premium, $6 ; J. Frank Foster, North Andover, second premium, $5.

*Commitee*—Abel Stickney, Wilbur F. Proctor, S. F. Newman.

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## STALLIONS.

The Committee on Stallions present the following report :—

In the class of four-years-old and upwards there were eight entries, as follows :—

Charles S. Clark, Salem, four-years-old ; N. H. Boardman, Danvers, seven-years-old ; S. B. Gregory, Hamilton, six-years-old ; Byron Perkins, Georgetown, five-years-old ; A. T. Newhall, Newburyport, six-years-old ; Jas. M. Knights, Salem, four-years-old ; Thomas Sawyer, Boxford, five-years-old ; John I. Downing, Andover, five years old.

In the three-years-old class there were six entries as follows :—

George W. Rogers, Peabody ; Thomas W. Pierce, Topsfield. presented two, each three years of age. Samuel P. Prescott, Haverhill ; George W. Russell, North Andover ; Nathan J. Clark, Danvers. The fine, young stallion, "Winchester," presented for exhibition only, by Mr Franklin Alley of Marblehead, elicited the admiration of the Committee.

The awards were as follows :—

In the four-years-old and upward class—Charles S. Clark, Salem, first premium, $18 ; James M. Knights, Salem, second premium, $12 ; S. B, Gregory, Hamilton, third premium, $10.

In the three-years old—Thos W. Pierce, Topsfield, first premium, $10 ; George W. Rogers, Peabody, second premium, $6.

There were no entries for the "best Stallion of any age and five of his colts."

The Committee regret the almost total absence of a complete pedigree, and they urge, as of great importance to the breeders of the county, to ensure for them not only purity of blood, but freedom from hereditary unsoundness, that the Society oblige every one making his entry to hand in pedigrees of his stock. It is one thing to say that "my horse is a Messenger, or Morgan, or Hamiltonian ;" another thing to verify the statement. What the Committee ought to have, and what the Soci-

ety should insits on their having, is a written or printed authentic pedigree which, if necessary, could be vouched for and traced to the *Stud Books*, so that a man having a choice mare among us would not inquire into and insist upon having, before securing the services of a stallion, his antecedents. It may not be of any importance to those who do not care, and we hope this number is few, as long as they have a colt born, from what parents he comes, whether through unsound ones or not. But your Committee can hardly think, in this day of fine horses and fine breeding, that there are many in the old county of Essex who are so foolish as to neglect a matter of so much importance, and we urge this upon the Society as one of their most imperitive regulations.

Another valuable suggestion came as forcibly to this Committee as it has to others who have served upon this class of stock and have written upon it often, and that is *classification.* There is a great difference between a Percheron or Clysdale Stallion and a Hamiltonian or a Goldust, and they should be entirely separated in their class. No man in his senses would breed a mare to either of the former two classes with the expectaton of getting a colt which during his life would be worth anything for a road horse, and yet, he would be invaluable perhaps for heavy farm work, and none of us would expect a colt sired by Bysdike Hamiltonian, or a Winchester, or a Dorsey Goldust to be valuable except for rapid work on the road. The science of breeding proves this without a doubt. Would any man of sense expect a horse of fourteen hundred or fifteen hundred lbs to be able to move ten or twelve miles an hour for two or three consecutive hours and be alive or sound the next day; or would any one imagine that the place for Smuggler or Thomas Jefferson was before a drag? Therefore your Committee speak earnestly of the propriety of dividing the premiums and of making two distinct

classes; for instance, an amount of money for Stallions suitable for draft purposes or heavy farm work, and one for Stallions suitable for lighter and faster work, and we cannot see the least difficulty or impropriety in such a classification. The breeder of either of these classes will be well paid for his labor if he insists upon sound stock, and that where pedigree goes back through nothing but the purest blood. We as a people appreciate a fine horse, whether we need him for our farm work or for pleasure on the road and large prices will be paid for such horses. We shall always find poor horses enough and stupid people enough to raise them. It is the duty of all of us to urge the rearing of high priced horses, for just as long as there is a demand for them, and it is increasing yearly, he is anything but a progressive farmer who ignores this fact. and we doubt not that he who has raised a first class horse has derived just as much benefit pecuniarily if sold, as from a load of hay or a bushel of potatoes, there can be no question under circumstances ordinarily favorable that the breeding and raising of good horses is a profitable business. They are always in demand at prices which abundantly pay for the raising, no matter if the breeder's attention be in the direction of producing horses adapted for the road or draft, it pays to breed only the best of its kind. The difference in value between good and poor horses is very much greater than that which exists in any other live stock. Hogs or cattle are raised mainly for the value of the carcase and bought and sold by weight, with only a slight variation as to price in regard to quality, Not so with the horse; his form, style and color, his strength, the sparkle of his eye, the cut of his head, the quality of the bone, carriage of his tail, shape of each individual part which goes to make up the whole, his gait as well as his size and mental characteristics are all taken carefully into account in estimating the value of the animal. Having carefully chosen the sire, never breed to a "come by chance," and with a

good dam, success is reasonably certain and the business a profitable one. The ordinary farmer can scarcely invest in any business that will give such sure and large returns as the purchase of one or two good brood mares provided as we have already hinted, that he breed them with good judgment.

We hope to see, another year, a much finer display than the one just past (this was a good one) and feel sure that the interest of the Society will be largely benefitted by proper classification and insisting upon authenticated pedigrees.

JOHN HOBBS, Chairman.

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## BROOD MARES.

The Committee on Brood Mares with foal performed their duty with as much satisfaction to the owners probably as to themselves.

We were unanimous in giving the first premium of $18 to T. W. Pierce, of Topsfield, for his mare "Kitty," colt three months old; second premium of $12 was awarded to Reuben Alley, of Marblehead, for his black mare and foal four months old; the third premium of $10 we awarded to C. J. Norwood of Hamilton, for his Godfrey Patchen mare and foal three months old.

There being an unusually large number of brood mares contesting for premium the present year, you will perceive at once that it was a hard matter to decide upon.

*Committee*—Charles M. Lunt, George W. Boynton, E. F. Little.

## FAMILY HORSES.

The Committee on Family Horses report as follows:—

Charles H. Gould, Danvers, first premium, $18; William A. Dane, Hamilton, second premium, $12; Moses C. Reynolds, Sa- third premium, $10.

Several very fine horses were entered which in the judgment of the Committee do not come strictly under the class of family horses. We would suggest that the Society offer premiums for another class to be designated as *Gentlemen's Road Horses.* To such a class properly belongs a fine colt entered by E. B, Wildes of Ipswich, and a very valuable mare entered by George W. Rogers of Peabody, and several others.

The Committee have endeavored to adhere strictly to the qualities of family horses, regarding speed as secondary, and have given premiums accordingly.

*Commitee*—Y. G. Hurd, W. P. Bailey, J. G. Munsey, A. T. Newhall.

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## FARM AND DRAFT HORSES.

Your Committee on Farm and Draft Horses would submit the following report:—

The number of entries make was eighteen. We felt very much gratified at the large number of entries made and were still more pleased to see so nice a lot of horses, which for good looks and likewise as workers we think we have never seen equalled at any show. They seemed with scarce an exception to have been trained to know their business, as they certainly performed it in

a very satisfactory manner. We could but notice the improvement in this class of horses in the last few years. They seem to be indispensable on the farm, and any one can but notice how much more they are brought into use now than formerly. The farmer that twenty years ago kept but one horse through the Summer, and that one perhaps turned out to pasture a large part of the time, now keeps two, and quite likely four, in the stable to be ready at all times for whatever place they can be put to lighten the labor of the farm. We hope the interest in this class of horses will still continue as we think there is no animal on the farm that acts so important a part.

After considerable discussion we decided to award the first premium of $15 to A. T. Newhall, of Newburyport; the second of $12 to E. T. Knowlton, of Essex; the third of $10 to H. L. Tenney, of Newbury; the fourth of $6 to Joshua Roberts of Gloucester.

We would likewise mention the horse entered by Abijah P. Fuller, and also one entered by M. H Poor as splendid workers and were sorry that it was not our privilege to award them a premium.

*Commitee*—Edward H. Little, J. A. Wellman, Hugh Hill, Phineas E. Davis.

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## PAIRS OF DRAFT HORSES.

The Committee on Pairs of Draft Horses have attended to to their duty and would respectfully submit the following report:—

Edward P. Perley, Danvers, first premium, $15; David Knowlton, Essex, second premium, $10.

*Committee*—Henry Hobbs, Alonzo B. Fellows, S. A. Merrill, B. N. Dodge, E. H. Little, Jr.

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## COLTS, FIRST CLASS.

The Committee on First Class Colts report as follows:—

They have examined eleven colts, and some of them they would be very glad to give a premium to, but in their judgment they did not come within the rules of the Society.

### FOUR YEARS OLD.

J. W. Trask, Beverly, first premium, $12; C. W. Wilkins, Peabody, second premium, $8; John Gibney, Salem, third premium, $5.

### THREE YEARS OLD.

John Gibney, Salem, first premium, $10; H. A. Hardy, Danvers, second premium, $5.

*Committee*—C. H. Ordway, M. C. Andrews, T. T. Paine, Z. Cole.

## COLTS, SECOND CLASS.

The Committee on Colts, second class, would most respectfully report as follows:—

### TWO YEARS OLD.

Asa T. Newhall, Newburyport, first premium, $8; R. P. Cushman, Haverhill, second premium, $3.

YEARLINGS.

Wm. H. Brown, Peabody, first premium, $8; George W. Rogers, Peabody, second premium, $3.

The Committee would say that had there been more premiums their work would have been easier, as they find that dividing two premiums among twenty colts was a pretty hard example in arithmetic.

*Committee*—R. S. Bray, John Brown, Wm. E. Kimball.

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## SWINE.

The Committee on Swine report as follows:—

LARGE BREEDS

David W. Low, Gloucester, first premium, $10 for Chester White Boar; Joseph Kittredge, No. Andover, second premium, $6 for Columbia County Boar.

BREEDING SOWS.

Benjamin P. Ware, Marblehead, first premium, $10; W. J. Dale, Jr., No. Andover, second premium, $6 for Yorkshire Sow.

LITTER WEANED PIGS.

Daniel Carlton, No. Andover, first premium, $6.

SMALL BREEDS.

R. G. Buxton, Peabody, Boar, first premium, $10; W. J. Dale, Jr., Berkshire Boar, second premium, $6.

BREEDING SOWS.

T. O. Wardwell, No. Andover, Essex Sow, first premium, $10; T O. Wardwell, North Andover, Berkshire Sow, second premium, $6.

It is evident that a new interest has been awakened in regard to the keeping of swine by the farmers of Essex County, not only in numbers which you see at the Fair, but also in the improved breeds. Among the entries are Columbia County, Chester Whites, Yorkshire, French, Berkshire and Essex, many of them of them of superior merit, probably the largest show of swine that has ever been exhibited at the Essex County Fair, at least for a number of years.

And it was with some difficulty that your Committee come at any unanimity of opinion in making the awards. Some objecting to the Columbia County and Chester breeds because they looked so large and coarse; the Yorkshire, too lank and no bristles, while others disliked the Berkshire and Essex because so small and black. No doubt each one of the Committee would relish a good cooked ham from either breed, or what is better in regard to the pigs, agree with Charles Lamb, who in one of his essays declares "of all the delicacies of the whole mundane edibles, roast pig to be the most delicate."

But whatever difference of opinion your Committee may have had, they good naturedly agreed that the majority should rule.

In regard to the profit of keeping swine there is a wide difference of opinion. I am satisfied in my own mind that there is a profit, whether the object be the raising of pigs, store hogs or pork. Spring pigs almost always bring a good price, and as a rule I believe fat hogs do. One of the exhibitors at the present Fair sold his weaned pigs for fifteen dollars apiece. and good fat hogs are selling for twelve and one-half cents per pound. Sure-

ly these prices ought to be satisfactory when we consider the low prices of almost all other farm produce. When we consider the treatment a large portion of farmers give their swine, feeding the refuse of the kitchen a large part of the year, who wouldn't squeal? Is it any wonder that you hear some farmers say that it don't pay to keep swine. Let the swine receive the same care and attention the other animals of the farm receive, and who doubts but they will pay as well as any other product of the farm.

*Committee*—Charles C. Blunt, Albert Titcomb, Ira S. Woodman, Joseph Akerman, Frank Marsh.

STATEMENT OF DAVID W. LOW.

Thorough-bred Chester White Boar, "Fitz Eustace," farrowed at Massachusetts Agricultural College Farm, March 20, 1874.

Thorough-bred Chester White Breeding Sow, "Lady Clare," farrowed at same time and place as the Boar.

Pedigree of Chester White Pigs, Fitz Eustace and Lady Clare:—Sire Bismark, 3d; dam, Blanche by Marmion, bred by Dr. Cutter and awarded first premium wherever shown. Grand dam, Dolly, also bred by Dr. Cutter.

Bismark, 3d, bred by N. Guilbert, Gwynedd, Pa., sire, Bismark, 2d, grand sire, Bismark, 1st. Bismark 1st and 2d took first premiums wherever exhibited. Dam, Julie of Benjamin Werdner's stock.

Marmion's live weight at age of 2 years, 11 mos, 1020 lbs: Dolly's live weight at the age of 1 year and 8 mos was 437 lbs, dressed weight, 385 lbs.

The above information was furnished by Mr. Dillon, superintendent of farm of Massachusetts Agricultural College, of whom I had the pigs as soon as weaned.

My pigs have taken flesh faster than I wished them to, and could have been made to weigh a great deal more had I fed them more liberally with grain. Their united weight at time of Fair, 1 year, 6 mos old, was 970 lbs, which shows that they have not deteriorated from original stock.

STATEMENT OF R. G. BUXTON.

I offer for premium my French Boar, bred from the importation of John B. Clarke, Esq., Manchester, N. H. Said boar is two years old and has served eighty seven sows since the last Fair. I also offer for premium my full-blood Yorkshire Boar, four months old, bred from the stock of that celebrated breeder, Charles C. Chase, Manchester, N. H.

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## SHEEP.

The Committee on Sheep report as follows :—

FLOCK.

E. W. Jacobs, Peabody, first premium, $10; Joseph Kittredge, No. Andover, second premium, $6.

LAMBS.

E. W. Jacobs, Peabody, first premium, $4.

BUCK.

Willle G. Horton, Ipswich, first premium, $8.

*Committee*—A. H. Gould, T. G. Ordway, J. Z. Gordon, R. Jaques, A. Mansfield.

## POULTRY, FIRST CLASS.

The Committee on Poultry respectfully report that the number of entries was not as large as it has been at some of our Annual Shows, but the quality of the birds, taken as a whole, surpasses any of our preceding exhibitions. For many years there has been a steady improvement in this feature of our Shows, and your Committee congratulate the farmers of Essex County upon the manifestly increasing interest in poultry breeding and in the wise policy they have adopted of selecting thorough-bred fowls of a high standard to fill the place of the little mongrels which were almost exclusively bred by them a few years ago.

The Gallinaceous Division was very large. The Light and Dark Brahmas, exhibited by W. M. Ward, were very fine birds and were much admired for their enormous size and fine plumage. Better chickens, in their class, are seldom seen at any of our regular State poultry exhibitions. There were some very fine Leghorns, exhibited by P. Osborne, which attracted considerable attention, and there were also some splendid Dominiques which in the opinion of your Committee is one of the most profitable breeds that a farmer can keep..

The Columbarium Division was quite large for a county show, and your Committee awarded some gratuities which was all that they could do, as there are no premiums offered by the Society for Pigeons. Next came the Aquatic Division which was well represented, and the Ducks and Geese entered by Hobert Buxton were exceeingly well bred. Your Committee regret exceedingly that there are not more premiums offered for this class, and would recommend that a premlum be offered in the future for each variety of Ducks and Geese. Hoping these few suggestions will meet your approval, we make the following awards :—

BEST COLLECTION.

Geo. D. Walton, Peabody, Diploma; second to W. M. Ward, Peabody, "Harris' Insects;" third to Philip Osborn, Peabody, "Harris' Insects."

LIGHT BRAHMAS.

| | |
|---|---|
| W. M. Ward, Peabody, first premium, - | $ 3.00 |
| " " " second " - | 2.00 |

LIGHT BRAHMA CHICKS.

| | |
|---|---|
| W. M. Ward, Peabody, first premium, - | 3.00 |
| " " " second " - | 2.00 |

DARK BRAHMAS.

| | |
|---|---|
| W. M. Ward, Peabody, first premium, - | 3.00 |
| " " " second " - | 2.00 |

DARK BRAHMA CHICKS.

| | |
|---|---|
| W. M. Ward, Peabody, first premium, - | 3.00 |
| " " " second " - | 2.00 |

PARTRIDGE COCHINS

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|---|---|
| Horace Southwick, Peabody, first premium, - | 3.00 |
| Benjamin Millett, Danvers, second premium, - | 2.00 |

PARTRIDGE COCHIN CHICKS.

| | |
|---|---|
| Horace Southwick, Peabody, first premium, - | 3.00 |
| " " " second " - | 2.00 |

BLACK COCHINS.

| | |
|---|---|
| S. Dow, Peabody, first premium, - - | 3.00 |
| George H. Perkins, Danvers, second premium, - | 2.00 |

BLACK COCHIN CHICKS.

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|---|---|
| George H. Perkins, Danvers, first premium, - | 3.00 |

BUFF COCHINS.

| | |
|---|---|
| Arthur Elliott, Peabody, first premium, - | 3.00 |
| Geo. D. Walton, " second " - | 2.00 |

WHITE COCHINS.

| | |
|---|---|
| Geo. D. Walton, Peabody, first premium, - | 3.00 |
| Geo. D. Hill, Peabody, collection of Pigeons, gratuity, | 1.00 |
| H. N. Berry, " " " " | 1.00 |
| M. C. Andrews, Andover, " " " | 1.00 |

DUCKS.

| | |
|---|---|
| R. G. Buxton, Peabody, first premium, - | 3.00 |
| O. Gowen, West Newbury, second premium, - | 2.00 |

GEESE.

| | |
|---|---|
| R. G. Buxton, Peabody, first premium, - | 3.00 |
| George D. Walton, Peabody, second premium | 2.00 |

TURKEYS.

| | |
|---|---|
| George B. Dodge, Hamilton, first premium, - | 3.00 |

*Committee*—John Swinerton, F. B. Messer, Jasper Rea.

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## POULTRY—SECOND CLASS.

The Committee on Poultry, Second Class, respectfully report :

PLYMOUTH ROCK.

| | |
|---|---|
| George D. Walton, Peabody, first premium, - | $ 3.00 |
| " " " second premium, - | 2.00 |
| Proctor & Fisk, Danvers, gratuity, - - | 1.00 |

PLYMOUTH ROCK CHICKS.

| | |
|---|---|
| Chas. W. Hatch, Danvers, first premium, | 3.00 |
| " " " second premium, | 2.00 |
| B. M. Hills, Danvers, gratuity, | 1.00 |

DOMINIQUE CHICKS.

| | |
|---|---|
| John Swinerton, Danvers, first premium, | 3.00 |
| " " " second premium, | 2.00 |

WHITE LEGHORNS.

| | |
|---|---|
| Philip L. Osborne, Peabody, first premium, | 3.00 |
| George D. Walton, Peabody, second premium, | 2.00 |

WHITE LEGHORN CHICKS.

| | |
|---|---|
| Philip L. Osborne, Peabody, first premium, | 3.00 |
| " " " second premium, | 2.00 |
| George J. Johnson, Rowley, gratuity, | 1.00 |
| W. F. Osgood, Salem, gratuity, | 1.00 |

BROWN LEGHORN FOWLS.

| | |
|---|---|
| Allen Lee, Manchester, first premium, | 3.00 |
| Geo. D. Walton, Peabody, second premium, | 2.00 |

CHICKS.

| | |
|---|---|
| Geo. J. Johnson, Rowley, first premium, | 3.00 |
| Allen Lee, Manchester, second premium, | 2.00 |

BLACK SPANISH FOWLS.

| | |
|---|---|
| Geo. D. Walton, Peabody, first premium, | 3.00 |
| W. H. Allen, Manchester, second premium, | 2.00 |

CHICKS.

| | |
|---|---|
| W. H. Allen, Manchester, fiirst premium, | 3.00 |

POLAND FOWLS.

| | |
|---|---|
| Willie Barnard, Danvers, first premium, | 3.00 |
| Geo. H. Perkins, Danvers, second premium, | 2.00 |

CHICKS GOLDEN.

| | |
|---|---|
| Willie Barnard, Danvers, second premium. - | 2.00 |
| " " " " " (Silver) - | 2.00 |

DORKINGS.

| | |
|---|---|
| George D. Walton, Peabody, first premium, - | 3.00 |

BANTAMS.

| | |
|---|---|
| W M. Ward, Peabody, first premium, - | 3.00 |

BANTAM CHICKS.

| | |
|---|---|
| H. A. Southwick, Peabody, first premium, - | 3.00 |
| H. M. Berry, Peabody, second premium, - | 2.00 |
| Willie Potter, Peabody, gratuity, - - | 1.00 |

*Committee*—Nathaniel Shatswell, George N. Ordway, Eben R. Savary.

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## PLOUGHING—DOUBLE TEAMS.

The Committee report as follows:—

R. T. Jaques & R. S. Bray, Newbury, first premium, $12; Jacob L. Farnam, North Andover, second premium, $10; Jacob E. Spring, Danvers, third premium, $9; Joseph Horton, Ipswich, fourth premium, $8.

*Commitee*—D. Bradstreet, Robert A. Smith, Joshua N. Kent, Israel A. Rogers.

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## PLOUGHING—SINGLE TEAMS.

The Committee on Ploughing with Single Teams report that there were four entries for premium, but only three competitors

appeared upon the ground, as follows:—Chas. P. Preston, Danvers, Hussey, No. 2; John P. Palmer, Swampscott, Lion, No. 61; A. T. Newhall, Newburyport, Hussey, No. 16.

The work performed was of such extraordinary excellence that the Committee found it difficult to decide upon the relative merits of the contestants, and the time occupied in doing it was almost exactly the same.

They unanimously recommend the following award of premiums;—

A. T. Newhall, Newburyport, first premium, $10; J. P. Palmer, Swampscott, second premium, $7; Chas. P. Preston, Danvers, third premium, $5.

*Committee*—William Berry, Elbridge Merrill, Jos. S. Howe, Wm. Howe Burnham.

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## PLOUGHING—WITH HORSES.

The Committee on Ploughing with Horses would respectfully report:—

Cavanagh Brothers, Wenham, first premium, $12; A. T. Newhall, Newburyport, second premium, $10; R. S. Bray, Newbury, third premium, $8; Edward P. Perley, Danvers, fourth premium, $6; G. W. Russell, No. Andover, fifth premium, $4. Best Teamster, William Noble, Saugus, $10.

*Committee*—A. B. Fellows, W. H. Felton, Andrew Lane, J. O. Winkley.

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## PLOUGHING WITH SWIVEL PLOUGH.

Foster & Russell, North Andover, Double Ox Team, first premium, $12; Albert Titcomb, Rowley, Single Ox Team, second

premium, $10; Sylvester Dane, Hamilton, Two Horse Team, third premium, $8; A. H. Gould, Topsfield, Double Ox Team, fourth premium, $5.

*Committee*—D. G. Todd, Nathaniel Gage, Henry Cloutman, Adoniram Porter, David Smith.

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## PLOUGHING BY BOYS.

By the liberality of Gen. Sutton, President of the Society, fifty dollars were placed at the disposal of the Committee to be awarded in three premiums for the best ploughing by Boys of eighteen years or under. There were four entries as follows :—

Charles S. Smith, Hamilton, 16; Walter F. Dodge, Beverly, 16; Willie G. Horton, Ipswich, 15; Aaron Winslow, Swampscott, 16.

The boys quietly and deliberately attended to their work and the ploughing was very creditably done. The Committee unanimously award the premiums as follows —

Aaron Winslow, Swampscott, first premium, $25; Walter F. Dodge, Beverly, second premium, $15; Charles S. Smith, Hamilton, third premium, $10.

*Committee*—Josiah Newhall, Wm. J. Dale, Jr., Alden C. Estes, Henry E. Smith, Thomas G. Ordway.

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## AGRICULTURAL IMPLEMENTS.

Ames Plough Company, Boston, best collection,
Diploma and $ 15.00

Whittemore Bros., Boston, collection Agricultural Tools, 10.00
S. A. Merrill, Danvers, Buckeye Mower, 5.00
S. A. Merrill, Danvers, Nye Bay State Rake, 5.00
S. Frank Ayers, Boxford, Best Ox Yoke, 3.00
Andrew Dowbridge & Co., Salem, Patent Roofing, gratuity, 3.00
George W. Rogers, Peabody, Double Mould Board Plow, gratuity, 3.00
S. S. Hickok, Methuen, Potato Digger, gratuity, 10.00
S. S. Hickok, Methuen, Castor, gratuity, 1.00

*Committee*—Bennett Griffin, E. K. Lee, Warren Ordway.

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## CARRIAGES.

The Committee on Carriages report as follows:—

Sawyer & Chase, Lynn, Extension Top Carryall and Piano Top Buggy, Diploma and $ 15.00
William B. Peart, Danvers, 2 Express Wagons, 10.00
William H. Brown, Danvers, Farm Wagon, 5.00
H. H. Pillsbury, Danvers, largest display of Carriages, 10.00

*Committee*—Aaron Sawyer, Joseph O. Proctor, L. G. Holt, T. K. Leach, F. S. C. Herrick.

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## DAIRY.

G. W. Russell, North Andover, for butter, first premium, $10; W. H. Allen, Manchester, do. second premium, $8; Mrs. J. R. Bailey, Bradford, do. third premium, $6.

*Committee*—S. G. Sargent, Nathaniel Lambert, Israel Herrick.

STATEMENT OF G. W. RUSSELL.

I enter for premium one box of Butter of fifteen pounds, a part of a churning made from my herd of eight Jersey Cows, thorough-bred.

My cows are tied in the stable and milked there every night the year round, and the milk carried directly to the milk cellar under the house, and strained into milk pans, about three quarts into each pan. The milk is skimmed every morning and the cream put into tin jars holding ten quarts and churned every second day in summer and twice a week in winter, churned in Blanchard's churn which takes from fifteen to forty minutes, then the butter is taken out and worked by hand until the buttermilk is nearly worked out, and then salted down and allowed to stand until next morning when it is finished by being worked over and then stamped or moulded for market, use salt at the rate of fourteen ounces to twenty pounds of butter that being about as salt as my customers like it. Delivered to my customers once a week the year round at fifty cents a pound.

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## BREAD AND HONEY.

The Committee on Bread and Honey award the following gratuities :—

Miss J. M. Smith, Danvers, $3 ; Mrs. Mary Cromins, Danvers, $2 ; Mrs. N. T. Davison, Lynn, $1 ; Mrs. C. H. Joy, Mrs. Henry Very, Mrs. Wm. Long, Mrs. E. R. Knapp, Mrs. J. Blackie, Danvers, Miss Rebecca Carlton, North Andover, Mrs. S. M. Bailey, Bradford, 50 cents each ; Miss M. W. French, Danvers, Graham, $1 ; Messrs. Hale & Davis, Peabody, Assorted, $1.

Several specimens of bread were entered of more or less merit for which no gratuities were awarded as no process of making was given.

HONEY.

Elias E. Porter, Danvers, $3 ; Dean A. Perley, Danvers, $2 ; C. N. Ingalls, Danvers, $1.

CANNED FRUIT AND PRESERVES.

Mrs. R. K. Sears, Danvers, Variety, $1 ; Mrs. Holt, Andover, Mrs. C. E. Smith, Danvers, Mrs. Alphonso Mason, Beverly, Mrs. E. T. Waldron, Danvers, 50 cents each.

*Committee*—J. B. Swett, Henry Alley, Mrs. W. H. Burnham, Mrs. J. D. Philbrick, Mrs. Charles Perley.

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## PEARS.

The Committe required to sit in judgment on the merits of Pears, respectfully report that our attention has been duly called to three hundred and seventy-four plates, ninety-three exhibitors from twenty-four cities and towns. The limited time for our work rendered it difficult to do justice. If in any case we have failed, we hope that contributors and all interested will believe that it was not through lack of good intentions.

We award the following premiums and gratuities :—

For the best twelve specimens of the following varieties, a premium of $3 :—J. S. Ives, Salem, Bartlett ; Isaac Hardy, Peabody, Belle Lucrative ; J. Henry Hill, Amesbury, Beurre Bosc ; Peter Wait, Danvers, Beurre Clairgeau ; John V. Stevens, Peabody, Beurre d'Angou ; Thomas Capers, Newburyport, Beurre Superfin ; W. B. Peart, Danvers, Buffum ; Solomon Fuller, Dan-

vers, Duchess d'Angouleme; S. Southwick, Peabody, Dana's Hovey; T. C. Thurlow, West Newbury, Doyenne Boussock; George Pettengill, Salem, Golden Beurre of Bilboa; Wm. W. Perkins, Newbury, Howell; Thomas Capers, Newburyport, Lawrence; Alfred Kittredge, Haverhill, Louis Bonne d'Jersey; E. Berry, Danvers, Maria Louise; E. Bradstreet, Danvers, Onondaga; John V. Stevens, Peabody, Paradise d'Automne; George J. Johnson, Rowley, Seckel; Isaac Hardy, Peabody, Urbaniste; Peter Wait, Danvers, Vicar of Winkfield; Thomas Capers, Newburyport, Winter Nelis; George Pettengill, Salem, St. Michael Archange; M. G. Lambert, Rowley, Sheldon.

J. Henry Hill, Amesbury, $6, for the best collection of fifteen varieties; E. F. Webster, Haverhill, $4, for the best ten varieties. T. C. Thurlow, West Newbury, collection, $3; B. P. Ware, Marblehead, collection, $3. W. E. Killam, Boxford, one dish Flemish Beauties, $1.50; Wm. Black, Danvers, gratuity, $1.50; Thomas Capers, Newburyport, Pound Pear, $1.

Gratuities of $1 each to A. H. Gould, Topsfield; George Pettengill, Salem; Thomas Capers, Newburyport, for Clapp's Favorite; J. Henry Hill, Amesbury, for Dana's Hovey; Isaac Hardy, Peabody, for Louis Bonne de Jersey; George W. Taylor, Peabody; J. A. Learoyd, Danvers; D. Pettengill, Danvers; C. H. Boynton, Salem; S. A. Merrill, Danvers

*Committee*—G. W. Gage, Henry Saltonstall, John M. Ives, Wm. Huff, Robert Manning, J. E. Buswell.

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## APPLES.

The Committee would award the following premiums and gratuities, viz:—

For the best twelve specimens of the following varieties a premium of $3 each—Miss Lizzie Greig, Danvers, Baldwin; E. Bradstreet, Danvers, Danvers Winter Sweet; Benjamin P. Ware, Marblehead, Drap d'Or, Pickman Pippin, and Sweet Baldwin; James Flint, Middleton, Hurlbut and Ladies' Sweet; J. Henry Hill, Amesbury, Hubbardston Nonsuch; R. C. Bassett, Salem, Killam Hill; W. W. Perkins, Newbury, Porter; W. H. Allen, Manchester, Roxbury Russet; Peter Wait, Danvers, R. I. Greening; Fred'k Howe, Danvers, Seaver's Sweet; Winthrop Andrews, Gravestein; Abram Patch, Jr., Danvers, Hunt's Russet.

For the best twelve of other varieties, $1.50 each—Wm. Huff, Newburyport, Northern Spy; Nettie A. Greig, Danvers, Minister; J. Henry Hill, Amesbury, King of Tompkins Co; D. W. Low, Gloucester, Honey Sweet; Nathan Bushby, Peabody, Fameuse; Austin J. Peasley, Peabody, Lyscom; M. Collins, Danvers, Fall Harvey; Winthrop Andrews, Danvers, Yellow Bellefleur; S. P. Fowler, Danvers, Jonathan; Peter Wait, Danvers, Garden Apple; Wm. W. Perkins, Newbury, Moody Apple; W. B. Woodman, Danvers, N. Y. Pippin; A. M. Putnam, Danvers, Swaar.

B. P. Ware, Marblehead, $8, best collection of 20 varieties.
Wm. W. Perkins, Newbury, 6, " " 15 "
Peter Wait, Danvers, 4, " " 10 "
For the best 24 specimens, (Porter) $6, T. C. Thurlow, West Newbury.

For Crab Apples, a premium of $1.50 each to W. B. Richards. Peabody; S. G. Jones, Salem; S. Fuller, Peter Wait, S. Knights and Mrs. A. P. Swinerton, Danvers.

Gratuities of $1.50 each to Miss Mary Lambert, Rowley, A. J. Hubbard and Joseph Moore, Peabody; J. H, Jones, Jr., Mrs. G. H. Perkins and W. B. Woodman, Danvers.

Gratuities of $1.00 each to C. H- Buxton and W. B. Richards, Salem; A. P. Blake, Peabody; A. H. Gould and J. Waters, Topsfield; S. A. Merrill, J. W. Porter, J. W. Ropes, J. L. Smart, S. D. Spaulding, M. Welch, E. Bradstreet, Horatio Perry and H. G. Hyde, Danvers; W. H. Patch, Rockport.

There were upon the tables 334 plates of apples from 122 contributors, and it would be singular if some that were worthy of notice had not been overlooked. Your Committee do not claim to be perfect, and any oversight in these awards we trust will be pardoned.

The most noticeable apple upon the table was the Porter, of which there were many fine specimens, and it is a singular fact that this, one of the best of fall apples, is a regular odd year bearer; So it has been for several years past, and it is worthy of note too, that nearly all of our best and most profitable apples had their origin in this immediate vicinity. This is true of the Baldwin, Hubbardston, Nonsuch, Roxbury Russet, Porter, Hunt's Russet &c.; we were pleased to see more and better specimens of this last than we have ever before seen at any exhibition. This certainly is a step in advance, as the quality of this apple is hardly surpassed by any other winter fruit. We would like to see another apple of the very best quality more extensively cultivated, viz—the Garden Royal, which during its season (September) is surpassed by none. We cannot too strongly recommend that quality instead of quantity be more sought after in the selection of varieties. Such kinds as William's Favorite, Sweet Bough, Gravestein, Garden Royal and Hunt's Russet are very far in advance of Alexander, Drap d'Or, Gloria Mundi and several others of this sort which figured conspicuously upon our tables.

As this is not the "apple year" it was not to be expected that the tables would be loaded with the finest specimens, free from

every blemish—but we were happily disappointed in finding so many and so good, and are free to say that in our opinion this exhibition of apples in old Essex County would do credit to any county or even state society in the country; and we note this fact with all the more pleasure, because the apple has of late years received so much abuse among us, and the planting and care of apple trees been ridiculed by those even who would be our teachers.

Even the subject of the "permanent decline of the apple orchards of New England" has been suggested by the highest authority in our land, and it becomes us all (all at least who intend to raise our own apples and follow it as a profitable business) to look into these things and see if they are really so.

Our own opinion is simply this; that there is a "permanent decline" in many and most of the apple orchards in this part of New England, and that it arises from sheer neglect or an undue zeal in the wrong direction. Who that has travelled through any of the towns in this county, during the last summer, has not noticed with sadness and humiliation the effects of the tent caterpillar? or seen the trees "burnt as with fire" by the persistent canker worm, thus marring the beauty of our otherwise beautiful scenery? can trees in such a condition be reasonably expected to bear regular crops of good marketable fruit? or if left wholly to the ravages of these and other insects for five, ten or fifteen years, is it a wonder that many of our orchards should show symptoms of a "permanent decline?"

We notice in the Transactions of the Mass. Horticultural Society for 1874 that the subject of "Legislative enactments to prevent the multiplication of injurious insects in neglected orchards" was fully discussed, and a bill to that effect strongly urged by some of the members. In fact such a bill was presented some six years ago to the Agricultural Committee of the

Legislature, but for some unexplained reason was never reported. Your Committee, in behalf of the Essex Society, would go heart and hand for such a law, provided it could be passed and carried into successful operation.

At present, in lieu of such a law by the Legislature, your Committee cannot too strongly urge upon agriculturalists and fruit growers everywhere, to cut down old and neglected apple trees, not only in pastures and by road sides but in fields and gardens, those that your good judgment and common sense would lead you to think are past recovery or not worth protecting we would say emphatically *cut down.* The same would apply to the wild cherry tree, which is a pest and a nuisance everywhere. Those of our apple trees which are worth anything we would say *protect* and cultivate as for any other farm crop, which treatment we have found both by observation and experience will recover the trees, causing them to make a strong vigorous growth and bear abundant crops of fruit, thus in themselves ridiculing the idea of a "permanent decline."

This Society has for several years past offered very liberal premiums for the "best conducted experiment for preventing the ravages of the canker worm," and although experiments have been made and patents applied for, and in one or two instances premiums awarded, we regret to say that in many sections of this county the canker worms still have it pretty much their own way. Probably if carefully attended to, these new fashioned troughs for oil or coal tar would be effectual; but how often do we see them neglected for a whole season. How often do we see the oil overflowing or oozing out and covering a large portion of the trunk below, thus injuring the tree as much as the worms themselves. These troughs are expensive and ought to be attended to when applied, and for a few trees in garden or orchard are probably the best thing, but, without treading on any one's

toes, we believe the whole thing to be a failure, and that the old method of applying printer's ink still the best. One member of your Committee protects a thousand trees every year with this "grub ink" so effectually that only worms enough are left to keep the seed good, and at an expense, reckoning both labor and material, of only about four cents to a tree annually. This protection would be still more effectual were it not that many of the orchards in the immediate neighborhood are not protected at all.

The best method is to commence in good season in the fall, about October first, and tack tightly narrow strips of tarred paper, some five or six inches wide, around the tree just below the limbs; upon this apply the ink (when warm in the middle of the day) a good coat at first, afterwards a mere touching will answer; apply once or twice a week till cold weather sets in, and should there be a long continued warm spell in winter, an application or two might be well. Commence in the spring as soon as the frost is out four or five inches, and continue as long as the grubs run, generally about a month. Remove the bandages every spring. Procure a good article and follow it up carefully for one or two years and very few worms will be left.

For destroying the caterpillar, commence when they are quite small; take them when they are at home, generally early in the morning, or by ten or eleven o'clock in the forenoon. The "handiest" way to kill them is the best, though a stiff, conical brush attatched to a pole is very convenient. If all would take hold in earnest, these pests might easily be got rid of, as they are much more controlable than the canker worm. The apple tree borer at times is troublesome, but can easily be destroyed. The curculio appears at times as though determined to destroy all our fruit; but one thing is certain, they are not more plenty than they were twenty years ago, and with the destruction of our plums and many of our sweet cherries they appear to be par

tially satisfied, and with nothing left but the apple and pear to prey upon, they will probably diminish rather than increase.

We certainly congratulate our friends of Essex County, that with all these hindrances and discouragements, so many apples continue to be raised, and that so much of enthusiasm prevails as should prompt one hundred and twenty-two contributors to bring up here their treasures, fit offering to Pomona. We bid you God-speed, fully believing that the worst is past and that we shall yet have the apple, that best and most precious of all fruits, in its former glory and abundance, we will labor together for this good end.

*Committee*—T. C. Thurlow, D H. Stickney, John W. Marshal, Joseph Smith.

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## PEACHES, GRAPES AND ASSORTED FRUITS.

The Committee on Peaches, Grapes and Assorted Fruits report 27 entries of Peaches, consisting of 60 plates and 1 branch; 33 entries of Grapes of 115 plates; 2 entries of baskets of Assorted Fruits; 2 entries of 2 plates of Plums, and 3 entries of 3 plates of Quinces in this department of the Fruit exhibition, and have awarded the following premiums and gratuities:—

### PEACHES.

Solomon Fuller, Danvers, best 9 specimens of White Flesh, for Early York, (free-stone) premium, $2; Thomas Capers, Newburyport, best 9 specimens of Yellow Flesh, for Susquehanna, premium, $2; also for the best Essex County Seedling, premium, $2, for seedling of that name; T. C. Thurlow, West Newbury, for best collection of Peaches, (standard varieties) premium,

$3; George W. Gage, Methuen, and Thomas Capèrs, Newburyport, for fine collections, gratuities, $1.50 each; John S. Ives, Salem, Blood, (preserving) gratuity, $1.50; S. H. Putnam, Danvers, White Flesh free-stone seedling, J. Silvester, do., do., and George W. Gage, Methuen, seedling, and Daniel Richards, Danvers, seedling, $1 each; Peter Wait, Danvers, white seedling, H. M. Osborne Peabody, seedling, A. Kittredge, Haverhill, clingstone seedling, 50 cents each; E. F. Webster, Haverhill, Honest John's, Solomon Fuller, Danvers, best Early Crawford, George Pettengill, Danvers, Salways, $1 each.

GRAPES.

E. P. Richardson, Lawrence, best four bunches Concord, Clinton, Adirondack, Rogers' No. 19 or Merrimac, Rogers' No. 22, or Salem, premiums, $3 for each; George W. Gage, Methuen, best four bunches of Hartford Prolific, Israella, Rogers' No. 3, or Massasoit, premiums, $3 for each; George Pettengill, Salem, best four bunches of Isabella, premium, $3; James Lowrie, Danvers, best four bunches Delaware and Iona, premiums, $3 for each; Franklin Upton, Danvers, best four bunches of Creveling, Allen's Hybrid, Eumelan, and Rogers' No. 15, or Agawam, premiums, $3 for each; George W. Taylor, Peabody, best four bunches of Rogers' No. 39. premium $3; George W. Rogers, Salem, best collection of Cold House Grapes, first premium, $6, (only collection exhibited.) J. W. Ropes, Danvers, best 10 varieties of not less than 1 pound each, premium, $7; D. H. Stickney, Groveland, seedling, gratuity, $1; Franklin Upton, Danvers, Rebecca, Walters and Israella, gratuities, $1 for each; Rufus Goodwin, Haverhill, for excellent Delawares and Concords from two years old vines, gratuities, $1 for each; M. W. Pope, Danvers, plate of assorted grapes, gratuity, $1.50; D. H. Stickney, Groveland, extra Concords, gratuity, $1; Peter Wait, Danvers, Israella, Josiah Trask, Danvers, Diana, Mrs. D. J. Preston

Danvers, Concord, gratuities, 50 cents each. Joseph S. Chase, Malden, deserves honorable mention for exhibiting some choice Concords.

ASSORTED FRUITS.

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| Peter Wait, Danvers, | basket of Assorted Fruits, | 1st prem. | | $4.00 |
| A. H. Gould, Topsfield, | " " " | 2d " | | 3.00 |
| H. B. Leonard, Danvers, | Plums, | gratuity, | - | 1.00 |
| Peter Wait, | " " " | | - | 50 |
| Peter Wait. | " Quinces, | " | - | 1.00 |

The display in this department, especially in Peaches, excelled any previous exhibition, at least for a number of years. Numerous seedling peaches were exhibited, their qualities being tested and merits discussed by your Committee, and the ones for which premiums and gratuities were awarded are really *choice*, so juicy and with a peachy flavor that you seldom find outside of New England, if outside of our county. Such varieties should be preserved and increased by budding from them, which a part if not all of the owners are willing to have done.

The Susquehanna is an extra large peach and an extra fine one. Mr. Capers says that it has been a shy bearer, has he thought that a little too much gravel might have been the cause of that? at any rate we do not know of any one who wouldn't wait for them even if they are shy. His Essex County seedling is delicious. Many other seedlings were exhibited that were of good size and color, but were not in a condition to test, being later, some of which are no doubt excellent when ripe.

Of Grapes the show was good, extra good for Essex County in out door grapes, and if Mr. Richardson is a "novice in fruit culture," as he says, we wish there were more of them in the county. Our chairman thought he was one, but if "by their fruit ye shall know them," he concludes that he is a know nothing.

Mr. Stickney exhibited some Concords, the fruit being so monstrous in size, that it was the general impression that it was unnatural. His statement shows how it was done. His seedling was tried by the Committee who were agreeably surprised at its quality. One of our Committee, Mr. Hill of Amesbury, exhibited the finest Allen's Hybrid on the table, which were not included in the entries.

Of Assorted Fruits the lavish displays in baskets of Messrs Wait and Gould caused many a mouth to water for them.

The show of Plums and Quinces was very slim, only two plates of plums, but they were nice ones. We would recommend to the Society the importance of fostering the cultivation of plums by the offer of liberal premiums for their exhibition, and a special liberal premium for the cure of the black wart on the trees, for we cannot but believe that a fruit that was so abundant and fine in Essex County twenty years ago, can be redeemed from its present curse by steady, persistent effort which should be encouraged. Quinces also should have a premium offered for the best plate of each kind.

Looking back upon the record of our Society, as published, in the reports of Committees on Fruit, we find year after year awarded premiums and gratuities for choice fruit that was a gratification to those interested and a pleasing sight to the looker on at the hall. But what lasting information to the Society was gained by it? None. If Mr. A. had better fruit than Mr. B., and Mr. C. had unhealthy and unproductive trees and vines so that he could not exhibit at all, how was he to get information to help him unless he visited or wrote to Mr. A. to know how he did it, which he would not be likely to get in as good a way as from the report of a committee who passes judgment on the merits of the fruits exhibited and who are entitled by the rules of our Society, to receive such information, and which if not furnished should be

sought after for their own information and the information of hundreds, aye, thousands who read the Annual report of the Society's doings, many of whom are unable to attend the Exhibition.

Feeling such a lack of information on a subject which deeply interests a great many, and finding myself, much to my surprise from my imperfect knowledge of the subject, Chairman of this Committee, I felt that this year, at least, the Committee ought to take a new departure from the old rut, and therefore, to do it, called upon the principal exhibitors to put their shoulders to the wheels and help them out by answering the following questions: How were your vines started, by single eye, cuttings or layers? how old are they? how old were they when planted? what was the soil? how enriched since and when? what exposure have your vines? how trained? how trimmed and when? do your grapes ripen well every year? how many vines have you and the kinds? what kinds do you recommend as best adapted for Essex County soil, freest of disease and surest of ripening?

How many peach trees have you and the kinds? how old are they? how old when set out for bearing? what was your soil? how and when enriched since? how trimmed? what kinds do you recommend for cultivation in Essex County for eating? for preserving?

Have your grape vines or peach trees had any disease, if so what have you done for it and the effect? Give any other information relating to grapes or peaches and their culture that you think might benefit our Society.

The response has been such that it has taken us clean out of the old rut with a good push ahead, and will be found in the shape of statements appended to this report, which to myself have proved interesting and instructive, and I feel assured will

To James H. Laver, of Gloucester, crayon, 50 cents.

To Mrs. Sarah B. Saville, of Gloucester, painting, wild flowers, 50 cents.

To Clara F. Brackett, of Gloucester, tidy, 50 cents.

To Mrs. S. F. Small, of Gloucester, fancy sewing, 50 cents.

To Mrs. Ellen Lufkin, of Gloucester, laundry work, 50 cents.

To Mrs. Laura E. Elwell, of Gloucester, embroidered skirt, 50 cents.

To George Douglass, of Gloucester, pen work, 50 cents.

To. Mrs. John F. Wonson, of Gloucester, 2 pictures, 50 cents.

Whole number of contributors, 156.

Number awarded gratuities, 65.

Amount at disposal of Committee, $55.

Amount awarded by Committee, $44.50.

*For the Committee*—Andrew Nichols.

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## POULTRY.

A few, still remain in our county, who either from prejudice against all improvements, or some other cause are still satisfied with the barn-yard fowl, so called, a fowl bred hap hazard since the settlement of our country; but the number is small, and growing beautifully less compared with the rapidly increasing number of those who are not at all satisfied with the above, but want a more showy and profitable bird. This, some find in the Light Brahma, with its snow white feathers, in beautiful contrast to the black tail and penciled neck, which with its lofty carriage and contented appearance, admits it to the class of the most attractive; while its hardiness and disposition to make returns for all expense and trouble bestowed upon it make it the best of the winter layers. About the same may be said of the Dark Brahma as it differs but little from the Light except in plumage. Others find their beauties and great egg producers among the different varieties of Cochins all of which are beautiful when purely bred. A rapidly in-

creasing number find in the Plymouth Rock, a new variety, all they desire in poultry ; beauty, and utility. Again, some favor the French varieties, while a large number, which is fast approaching a majority of all poultry admirers give precedence to the Leghorn, a breed of which there are three varieties, viz. : Brown, Dominique and white—the Brown at the present time, standing on the top-most round. Thus we see that each variety of each breed has its admirers, and therefore, to interest and reach the pockets of all, no variety can be discarded.

It is the aim and object of the Essex Agricultural Society to promote the interests, not only of agriculturists, but of all producers, and the poultry breeder can only be benefited by creating more interest and enthusiasm in poultry raising; but, say many, the hen fever is high now,—admitted, but it is not high enough, or ever will be, until perfect birds of each variety become the rule instead of the exception.

The merchant, tailor, grocer, &c., &c., each and all put their hands in the producer's pocket, and so must he put his hand in their pockets, and how can he better do it than by producing perfect birds to sell, for many do keep, who cannot breed fowls.

Then, the poultry interest is one which the Society should foster and increase to the utmost. How shall it be done? As a starting point we respectfully offer the following suggestions.

Provide a tent or *some* shelter for the poultry when on exhibition, and again bring into the arena Essex Co's most experienced and, therefore, best breeders, who retired from the contest because they found neither profit or pleasure in exposing their birds which had been carefully housed at home, to the inclemency of the weather, unless it was in the colds and subsequent roup caused by such exposure.

Offer more premiums. A first and second for fowls and chickens of each variety of each breed recognized by the Society, whether it be one, as the Plymouth Rock, or three, as the Leghorn, and thereby, increase the interest and number of exhibitors. Increase the interest and pleasure of visitors by proper arrangement ; that is require each class, each breed, and each variety of each breed, to be placed contiguously, so

that the lover of any particular variety can examine those of his choice without going the entire length of the line of coops, and so that your committee can do its duty better and easier. Give no premiums when birds are not properly mated in the coops, or when they do not figure a certain number of points, the number to be fixed by the society.

The above suggestions are derived from the Massachusetts Poultry Association's rules at its exhibitions, and may be worthy of your consideration.

By adopting the foregoing rules, or better ones, as from time to time they suggest themselves to the society, we see no reason why the poultry exhibition, at the Essex Agricultural Society's annual fairs may not become equal to any in the state or nation.

*Chairman*—J. C. Underhill.

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## GRAIN CROPS.

A. P. Noyes, of Middleton, entered a crop of rye.

Two of the Committee viewed it on the second of July. It was nearly five feet high, remarkably even, free from rust, but apparently suffering from the unusually early drought. They would recommend awarding to him the diploma and premium of ten dollars.

It will be seen by the accompanying statement that the yield was thirty-three bushels per acre. The crop last year was corn. He makes no mention of the straw, which has been nearly as high in Boston market the past year as the best of English hay. The raising of grain in this county at the present time is up-hill work, and few, if any, would grow it, if they could get their land into grass without it. To some extent this can be done. The Early Rose potatoes ripen early enough so that they can be harvested and the land sown with grass seed soon enough for it to get well rooted before winter.

We get but little information from Mr. Noyes's statement in regard to the cost of growing a crop of rye. When rye is

worth one dollar per bushel, and labor costs twenty-five cents per hour, to cut with the cradle and bind and thresh with the flail, as we must do to save the straw, it will take a large part of the grain to pay for harvesting and threshing; if there is any margin above the cost, it must be upon the straw. Although rye may be grown upon comparatively poor soil, yet when the grain and straw are both sold from the farm it must be an exhausting crop.

We had no entry for wheat, oats or barley, and but one for Indian corn.

Lafayette Day, of Bradford, entered a crop of corn. The chairman was alone in his examination of this crop, but will take the responsibility of recommending the award of the premium of $10 and diploma to Mr. Day.

This field is near the Merrimac River; the soil appeared to be a sort of alluvial deposit, where corn can be grown as cheaply as in any part of the county.

From his statement we find the cost of growing the corn per

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| acre, for manure, thirty-two dollars, | | $32 00 |
| Ploughing, $6, harrowing, $3, seed, .70, planting, $6, | | 15 70 |
| Cultivating, $15, cutting stalks, 7, harvesting, 26, | | 48 00 |
| Cost, | | $63 70 |
| 83 bushels of corn, entire stock, | 68 40 | |
| Value of fodder, thirty dollars, | 30 00 | 98 40 |
| Total profit, | | $34 70 |

*For the Committee*—Wm. R. Putnam.

STATEMENT OF LAFAYETTE DAY.

BRADFORD, MASS., NOV. 7th, 1873.

MR. PRESTON:

DEAR SIR.—The Committee on grain crops have visited my premises and requested me to hand the report to you. I will now make a statement concerning the land. It is one acre and a half in size, the soil is loamy. In 1871, it produced a grass crop, in 1872 a corn crop. The dressing I used was twenty oxcart loads of barn-cellar manure per acre.

Treatment of 1873—This year I put on the same amount of manure, of which, four-fifths I ploughed in and the rest put in the hill. The cost of the manure was forty-five dollars. In addition to this I put on twenty bushels of ashes after the corn was up. Their value was three dollars and a half.

I ploughed it May 1st, eight to nine inches deep, at a cost of six dollars. It was harrowed twice, at a cost of three dollars. It was planted May 20th, three feet and nine inches apart each way, and from five to six kernels in a hill, which was about ten quarts per acre. The seed was that which was formerly known as the Mitchell corn, eight rowed yellow corn with a red cob. The cost of the seed was seventy cents; planting, six dollars.

It was cultivated three times, weeded once, and cultivated twice. The cost of cultivating, including weeding, was fifteen dollars. I cut and tied the stalks Sept. 1. The cost of cutting was seven dollars. The bulk was equal to three tons of English hay. It was harvested October 25th; cost of harvesting, including husking, was twenty-six dollars. The corn when shelled and weighed amounted to eighty-three bushels per acre. The bulk of the butt-stalks was about two tons.

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## ROOT CROPS.

The Committee on Root Crops respectfully report the following:—

The number of entries are few, and indicate a decreasing interest in the cultivation of many varieties of roots.

There were but three entries made this season. Two of onions; one by Mr. Albert Titcomb of Rowley, and one by Mr. George N. Ordway of West Newbury; and a crop of Cabbages by Mr. Albert E. Lufkin of Essex.

One statement came to the Committee in a very imperfect manner. The papers which have been laid before them are herewith submitted, and premiums awarded to those who have complied strictly with the rules of the society.

We award to Albert Titcomb of Rowley, for best crop of Danvers Onions, the 1st premium of Diploma and $10.

To Albert E. Lufkin of Essex, Diploma and $10, for his crop of Stone Mason Cabbages.

*Committee*—A. B. Fellows, James P. King, Joseph S. Howe, Aaron Low.

STATEMENT OF ALBERT TITCOMB.

Statement concerning a crop of onions, raised by Albert Titcomb in the town of Rowley, 1873.

In 1871 the crop was onions. Cattle manure from barn cellar, about thirty loads to acre was used.

The crop of 1872 was onions, and about the same kind and quantity of manure was used as in '71. A strong, floury soil with clay bottom.

For the crop of 1873, ploughed once the previous autumn, about five inches deep; after ploughing we applied thirty loads of thirty bushels each, barn cellar manure on the top. In the spring the land was thoroughly pulverized with wheel, tooth and brush harrows. The manure was applied in a green state, and became hard and crusty; fearing that it was not fertile enough for plant food in the early season, I spread on the top and harrowed in six hundred pounds of Cumberland Superphosphate to three fourths of an acre. We then raked the land smooth, and on the 13th of May sowed, with seed sower, Yellow Danvers Onion seed, at the rate of five pounds to the acre. Half the seed was new and half one year old. I think the new seed did the best. We hoed and weeded the bed four times, and weeded once when the onions were large. The crop was harvested in this manner:—We pulled four rows, threw them on the bed, then hoed the space and raked the weeds clean; we pulled four rows more and threw them on the clean space; hoed and raked as before, and so on through the whole bed.

Part of the onions were topped on the bed, the remainder carted to barn to be topped in unfavorable weather. The topping can be done much quicker on the bed if the weather is favorable.

*Cost of raising crop on half an acre.*

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| 15 loads manure at $2 50, | $37 50 |
| 300 lbs. Cumberland Superphosphate at 3 cents, | 9 00 |
| Ploughing, | 2 50 |
| Harrowing, | 2 50 |
| Raking, | 2 00 |
| Sowing seed, | 1 50 |
| Hoeing and weeding, | 25 00 |
| Pulling and topping, | 18 00 |
| Carting to barn, | 8 00 |
| Barrels, | 35 00 |
| Barrelling, | 6 00 |
| Carting to station, | 6 00 |
| Use of land, | 10 00 |
| Storing, | 5 00 |
| | $168 00 |
| Amount of crop 423 bushels to half acre or 147 bbls. at $3 50, | 514 50 |
| Net profit, | $346 50 |

The above statement is made by estimation, except the amount of crop which was measured by David J. Woodman.

STATEMENT OF ALBERT E. LUFKIN.

The land, on which the cabbages I enter for premium were raised is a hard clay soil; it had been in grass for fifteen years (or more) with very little manure during the time; and the crop for two or three years was very light.

Plowed in spring of '72; applied about three cords manure, mostly spread on; and planted with corn and potatoes; and had a very good crop.

Plowed this year May 19th. Spread on two cords manure and one cord rock-weed. Manured in the hill with one cord composted fish manure, and planted May 28th with Stone Mason cabbage; re-set about one-half the plants from the 18th to 20th of July.

The lot, as measured by the committee, contains 85 rods; and I have harvested from it 2,020 marketable cabbages, estimated to weigh 10 ponnds each.

*Dr.*

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| To 3 cords manure, | $24 00 |
| " Rockweed, | 3 00 |
| " 3 days labor, | 5 25 |
| " seed, | 2 00 |
| " cultivating, | 2 50 |
| " 7 days hoeing, | 14 00 |
| " 2 days setting plants, | 4 00 |
| " harvesting and marketing, | 25 00 |
| | $79 75 |

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| By 168 dozen cabbages at 75 cents, | $126 00 |
| Net profit, | 46 25 |

This is to certify that I have helped harvest the above crop and consider this a correct statement.

SAMUEL LUFKIN.

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## CRANBERRIES.

The Committee on the cultivation of the cranberry have attended to their duty and respectfully submit the following report:

Mr. Hiram A. Stiles, of Middleton, is the only person who claims a premium, under the rules of the Society, for his experiment in the cultivation of the cranberry. With this report will be found his statement of his method of cultivating that luxurious and healthful fruit. On the 12th of September, 1873, the Committee visited Mr. Stiles and viewed the grounds on which his experiments have been made. There we found a

recently added to my collection a few trees of the "Wild Goose Plum" which is said to resist all attacks of the curculio, if so it will prove a valuable acquisition. Light and well drained soil is best adapted for the plum.

STATEMENT OF THOS. CAPERS, NEWBURYPORT.

As regards peaches, we have a very favorable place for a few trees being sheltered from the north and north-west. We have in all twelve trees some of which are over twenty years old. I find the best way is to plant out one or two every year to keep up the stock.

Our trees suffer more from over-cropping and September gales than any disease, we have lost several large trees within a few years from that cause. Trees one year from the bud are better for transplanting than larger ones. Light, sandy soil or gravelly is better than damp, heavy soil as the trees do not make so much growth and the wood ripens better and produces more fruit buds. Prune away half their growth every spring.

I have not manured at all since they were planted. The Susquehenna. exhibited at the Fair, is planted in a narrow flower bed about eighteen inches wide with a gravel walk ten feet in width by the side of it, so that it is most all gravel. I planted the Susquehanna and Hale's Early in 1869, up to this year the former has been a very shy bearer, this year a full crop. Hale's Early has fruited every year full since planted, only one year did the rot affect them which is common to that variety.

I should recommend Hale's Early, Early Crawford, Stump of the World, Early York, Yellow Rareripe and Susquehanna as best for Essex County, there may be others, but those I have proved to be first class.

The seedling exhibited (Essex County) was raised from stones sent from South America five years ago. I have two others but not so good neither in size or quality. The Early Crawfords

which I exhibited was planted in 1872, one year from the bud. Some specimens I measured were nine and three-fourths inches in circumference.

Of grape vines we have about a dozen, comprising Hartford Prolific, Concord, Adirondac, Diana and Isabella. The Hartford I consider the best early grape, The Concord for general cultivation. I have two vines of Concord which are trained on a trellis over a steep bank facing the south-west, which a great many gardners think is different from all others they have tasted but I believe it is owing to its favorable situation which ripens them better. The Diana is a favorite variety with me only it is rather late. My grape vines are raised from layers, spur pruned part and part renewal. Last year my grapes were badly diseased, as were all in this part, this year no sign of any. Good drainage and high culture is very essential for grape vines, wood ashes is good. I cover the border every fall with six inches or more of manure and dig it in in the spring.

STATEMENT OF SOLOMON FULLER, DANVERS.

I would say that my vines were started from cuttings, about four years set. Soil of a light, sandy nature and manured mostly with leaf mould and stable manure, with some ashes, put around as a protection through the winter and worked in around them in the spring. My vines are protected by fences and trees very well. Think I have not had so good success in ripening as I should have had if their covering had been removed earlier in the spring. They are trained with two arms, cutting back pretty close after they shed their leaves. I have fruited them only two years and have had the best success with the Dracut Amber, Concord and Israella. I have about three dozen vines, ten varieties, more of the Concord than any other.

Of peach trees I have twenty-five trees in all of Early and Late Crawford, Early and Late York, Early Hale and the Old

Mixon, set out three years last spring the second year from the bud, taking care to keep them well mulched in summer when dry, as they are on very light sandy soil about 8 feet apart. I have taken great care to cover the ground under them after freezing, and not removing until the buds were safe from frost in the spring. When set I neglected to take off the tag and consequently the main stalks were cut with the wire, causing them to branch very low, some of the peaches were almost on the ground, bearing this year for the first time about six bushels. I enriched the soil the same as for grapes, The Early Hale is a very nice peach for eating and very early, the Early York and Old Mixon are later and very nice. My Early York were somewhat shaded, causing the flesh to look very delicate and white. For preserving, I have found the Crawfords and York very desirable. The peach trees have been troubled with borers and I have found lime-water a good remedy.

STATEMENT OF D. H. STICKNEY, GROVELAND.

I wish I could answer your questions in relation to the cultivation of the grape in a manner at all satisfactory to myself, for I have had abundant crops some years and nearly failures upon other years with the same treatment—indeed perhaps I ought not to use the word treatment for I have never followed any particular mode or method.

I have perhaps one hundred and fifty vines, mostly from layers. They are upon a variety of soil and were I to give an opinion I should say that my best success had been upon the poorest soil, I am of the opinion that land can be made so rich that you get a monstrous growth of wood at the expense of the fruit, I have also noticed that the best fruit has always been found upon vines from two to four years old. I can account for this in no other way other than the top has been allowed to make all the

wood that desired to grow, and, as sometimes is the case, the vine will start out with a heavy crop and every prospect of success, till the grape gets about its full size when it remains and hangs upon the vines until the leaves are all off, and never comes to anything at all. I know of no remedy unless it be to thin or reduce the crop one-half, or even more, and this we are loth to do, for if done at all it must be done in June or July when we are not sure but the conditions will be favorable for a full crop.

You ask what kinds I recommend. I hardly know what to say for I have had failures some years of all the varieties, still I would not part with any of them. I am quite sure the Concord will perfect its fruit more years in ten than any other variety now known.

I am also well satisfied that a high, dry, sandy soil, or a soil full of cobble-stones is the most desirable for the grape. Such a soil Mr. Gage of Methuen has, which enabled him to show a number of kinds of ripe fruit at the New England Show at Manchester. N. H. upon the first of September. I have to-day many bushels of grapes of full size hanging upon the vines, trying to color, which will be worthless. I think had my soil been similar to the above I should have had half as much wood, half as full crop which I think would have matured and been gone two weeks ago and been of the first quality.

My seedling I hope much from, it is a sure bearer, perfectly hardy and early enough to avoid frosts. My large Concord grapes were obtained by selecting the most vigorous canes early in the spring, allowing only one bunch of blooms to remain on each, and constantly heading in as fast as wood was inclined to make.

I am fully aware you will say I have not answered your questions, or given you any information at all, but I think this matter of grapes is something one must learn by experience, for it

is a fact to be denied that we are not in a section of the country that will produce a crop only once in a while, and this I am not sure should not be called a chance crop.

STATEMENT OF DANIEL RICHARDS, DANVERS.

My seedling peach came up under my bed-room window four years ago last spring, the third year it fruited two peaches, this season it had fifty, even sized. Ripens from 20th to 30th of September. Tree a vigorous grower, smooth bark, no gum, no yellow or curled leaf. Soil hard gravel, all the fertilizer put around it was coal ashes. I think the only way to get peaches is to plant the stone and use coal ashes, the fruit will average as good as budded trees. The exposure of my tree is north and east, cold. I have trimmed back one or two feet every fall, shall trim again in a few days. I have no objections if you want some buds when the time comes to use them.

STATEMENT OF JAMES LOWRIE, DANVERS.

My vines are from nine to twelve years old. When planted, one year old layers, they have a south-east exposure, are trained with horizontal arms spreading four feet each side. I trim from the fall of the leaf till the end of March, I perceive no difference to the vine by trimming any time during that period.

My grapes ripen well every year. I have in my garden 29 vines :— Delaware 14, Ionas 7. I never fruited a Concord until this summer, had them ripen up about eight days before Delawore, pulp within the berry well dissolved Had one plate in the fair but not very large, have larger next year, they are free of disease. Vine of Hartford Prolific is subject to consumption, had one nine years in bearing but died under my treatment, I have none now nor want it. Grapes mildewed somewhat, sulphured for it, result good. Iona I am going to plant more of.

To be honest on the point each grape vine has a different constitution from another, therefore I have studied the habits of but two, Delaware and Iona, but now I am going at the Concord and try to get sweet grapes such as grow south of Mason and Dixon's line. I have fruited a number of seedlings but had poor luck and destroyed them all except one which showed good promise, it ripened up its fruit, three bunches, in 1873 the eighteenth of August, berry smaller than the Delaware; ten bunches in 1874, first of September berry as large as the Delaware; in 1875 on one arm six feet long with twelve upright canes. had thirty bunches one size larger than the Delaware, ripe first of September. Leaf very much like Delaware, nothing wild in it but still it has its faults with stamens and pistils. The subject is too lengthy to go into here. I had Mr. Upton, who exhibited in the last Fair, come into my garden to see a trellis of *ripe* grapes the first of September.

STATEMENT OF GEORGE W. TAYLOR, PEABODY.

Your communication asking me to give you my experience regarding the culture of the grape is received, and although I have not achieved much success, perhaps a recital of my experience may be of some use to those who are about to commence the business of grape growing. At the start let me say to any one who expects to make the cultivation of the grape in Essex County a paying business, that it will be a vain attempt and will end in mortification and disgust.

Those who think that by buying up and storing their minds with the various treatises on the grape, they can go on and succeed where others less learned in the science of grape growing fail, and by a thorough knowledge of the pruning and

pinching, drenching and training and various other mysteries which are laid down so minutely as a guide for the amateur cultivator, can succeed in producing specimens rivaling those which we so often see exhibited in the book of paintings of fruits which the vendor of nursery stock uses to allure the innocent and unwary to invest in some newly brought out variety, and who expect to do this, sad defeat and disaster will surely overtake. Most of the books and writings on grape culture are put out as advertisements and as allurements to the eager seekers after something new to induce them to invest in the so called new and superior varieties which are ever being brought into notice and sold at high figures; when the trial of them proves that we have as good and even better kinds. And then the puny little plant which we parted with a five dollar bill to obtain, is cast aside for some of the tried and well known varieties which can be bought for about twenty-five cents per plant.

The grape when fully ripened is truly one of the most luscious of fruits and as such will ever be sought by the public, and it is a lamentable fact that our northern home is *not* the home of the vine, where the mild rays of the summer sun love to linger and the genial breezes of the tropics with the deep and warm soils incident to the "sunny south." There is her home and there will she give forth the rich harvests so delightful to man.

If we do succeed here in raising a few of inferior quality it is only by constant care and toilsome labor. A man would make more money raising potatoes at fifty cents a bushel than grapes at ten cents a pound which is about as much as one can obtain for the first clusters we are able to get into market. Long before our earliest ones are ripe, our markets are filled with grapes from the South, and the people have had their fill, or at least the time of high prices has passed and ours have to be sold at lower rates. I have been trying to raise grapes for the past twenty

years and have not as yet produced anything very satisfactory. Either my berries or bunches are small, or, if I highly manure the ground, the vines make such rampant growth that the wood ripens poorly, and the grapes seldom become fit for use.

In starting the vines I have used single eyes, cuttings and also layers, I have never had much trouble with either method, but think that I should prefer layers of one year's growth to either of the other methods. In my experience I have found that a good, strong one year old vine is the best to set, surest to grow and is at just the right age to train in any manner preferred by the cultivator. Some of my vines are twenty years old and others have been set only a year. I have set out vines more or less every year except the four years of the rebellion when I was away from home.

My location is one which I consider to be the best for this climate—a southern slope with ledges and pine trees in the rear to break off the cold northern winds and also the disagreeable blasts that come from the east. The rays of the September sun striking on the ledges heat them up and thus prolong the warmth far into the night, and consequently the frosts of early autumn are less liable to nip the foliage and thus retard the ripening. My soil is a gravelly loam mixed with broken fragments of stone, and is in and of itself rather poor; so rough and inaccessible that I cannot cultivate much with a team, and as I cannot raise cultivated crops there, I have planted grapes. If anything is done to my vines after well setting out, and an occasional top dressing of tan ashes, it is a light hoeing and top covering or mulch of old meadow hay, weeds or wood-wax.

As it is customary to cut and prune the vine I used to follow in the beaten track marked out by theorists. Of late years I have not used the knife so freely, and am well assured that I have been more successful as to good, well ripened wood and al-

so fruit. My vines are trained in various methods, some are on cedar pole trellisses, others are trained to wires stretched to stout locust posts set firmly in the ground while some are allowed to run over an old stone wall just as nature taught them.

The way that most of my vines are managed is in the following manner:—I cut red cedar posts about ten feet long and cut off the branches from six inches to three feet from the main stem, these posts I set from two and a half to three feet into the ground, and about six by ten feet apart. To each post I set one vine. I have learned that vines trained in this way are less trouble to manage and seem to do better in every way, being less liable to mildew and disease, the air circulates freely among them and the sun's rays will strike nearly every part. The consequence is that better fruit and larger clusters are obtained.

If I do trim my vines I generally do the most of it in the fall, sometime at the last of October or November, but I always cut off any offending branch when I feel disposed at any season of the year, and have never seen any bad effects from bleeding after severing a branch.

There are some two hundred vines on my premises and as fast as one dies out or is pulled up I generally set out another, usually a year old layer. I have now in bearing condition the Concord, Ives' seedling, Iona, Dracut Amber, Clinton, Hartford Prolific, Delaware, Taylor's Bullet, Elsingburg, Black Hawk, Allen's Hybrid, and the following of Rogers' Hybrids No's 1, 3, 9, 13, 15, 19, 22, 39, 41, 43, 44, 33, besides several seedlings of native grapes which are rather poor and foxy, having only the desirable qualities of early ripening and the hardiness and vigor of of an oak.

It is hard to decide which of the varieties are best suited for our climate; some years one kind will lead all others, while in other years it will fall far in the rear. Generally speaking those

varieties which are the hardiest in wood and best to ripen up the buds early in the fall, and the fruit also, have this fatal habit of giving only very poor flavored berries, while those of the rich perfume and sugary flavor are apt to be tender in wood and liable to be attacked by mildew and are so late in ripening their fruit that it is almost impossible to get any fit for the table.

Rogers' seedlings are, I am sorry to say, rather too tender for our County, and are so subject to mildew and disease that only a few should be attempted. It is a pity that such splendid fruit should be hampered with a parent stem so weak and liable to disease. Of all the grapes ever grown on my grounds I should prefer Rogers' seedlings if they were earlier and more hardy, particularly No's 3, 9, 15, 19, 22, 30, 39. Persons who plant Rogers' vines should never neglect to cover them in the fall, for if they are left without protection through the winter they are almost sure to be killed.

For all locations and all soils I should prefer the Concord above all others. This is taking all its points into consideration. While I know there are many that are far its superior in flavor and richness of fruit, it has no rival in hardiness or productiveness under all circumstances and in all localities.

A few vines of the Iona, Delaware, Hartford and Creveling should be planted and if one has a warm, sunny nook near his buildings, let him plant the Allen's Hybrids, or if he prefers it the Rebecca. Both are white grapes and excellent in flavor.

Of all the diseases to which the vine is subject mildew seems to be the most fatal; vines that are attacked soon lose their foliage and the berries stop growing and never ripen, but hang, an unsightly spectacle in the vineyard. Flour of sulphur is the best known remedy for mildew. It is applied to the parts attacked as soon as the disease makes its appearance and is best put on while the vines are wet with dew. Some use bellows to apply

it, but I think a good sized pepper box about the best thing to use while doctoring the plant. Constant care and watching is necessary, for the disease must not be allowed to spread. If it is to be checked at all one must begin early to combat it, if allowed to have its course the result will be no crop of grapes for that year.

Rose Bugs sometimes come in myriads and destroy both fruit and foliage. I know of no way except to kill as many as possible by hand picking. I have tried tobacco-water, whale-oil soap, and lime, all to no purpose, the bugs seem to be proof against all the poisons usually adopted to destroy insects.

After twenty years of study and labor among trees and plants I would not recommend any one to set out a vineyard in Essex County in the hope of ever making it a remunerative employment, much less would I suggest the possibility of ever procuring a first class grape by planting the seeds of any of our wild native sorts. While they have hardiness and earliness, they are all of them foxy and lack nearly all the essential qualities accorded good fruit, besides out of a hundred seedlings perhaps not more than two or three will ever bear at all and these seldom come up to a higher standard than the parent. Let every man who has a few rods of spare room in his garden set out a few vines of those varieties best suited to his taste. Don't try to get every new sort you see advertised and don't place too much credit in the high sounding story told by the printed circulars you will from time to time receive just as soon as you commence to plant grapes and your name becomes known to the vendors of nursery stock. Set out a Concord or two for your stand by or right bower, and you may put in as many of Rogers' Hybrids as you have time and patience to take care of. Never forget to cover all of your Rogers' vines every winter. I throw mine down on the ground and cover with hay or earth about three or

four inches deep and remove before the vines start in the spring. Vines should be uncovered and tied up to the stakes before the buds swell as they are very tender and are easily broken off in handling.

In conclusion let me add that it has been of much pleasure to me to be among my vines, and if I have not made it pay in dollars, I have had enough fruit for my family and some for my friends, and besides there is a solid satisfaction in gathering the fruit that has been produced by the labor of one's own hands. If it does require constant care it takes up the spare moments that are usually lost, or spent in some other employment that amounts to no more in the end than growing grapes.

STATEMENT OF GEORGE W. GAGE, METHUEN.

My vineyard is located on a southern slope about one-third the way up and one hundred feet from the valley below. The soil is friable with gravelly bottom naturally drained. It contains three hundred vines, the oldest of which is fifteen years, the youngest five years. My first planting was fifty vines on a patch from which I had taken two crops of apple trees (one too many) the residue of the vines on nursery ground, from which one crop of trees had been taken. Fertilized at planting with animal manure, afterwards an annual dressing with ashes or potash and bone.

I sometimes start with cuttings and layers, but the best method is with single eyes. After several years of slip-shod training I believe the following to be the best. Commence with one or two year old vines, cut down to two eyes, allowing them to grow about as they will, except training them to stakes. In November cut down to two eyes. Second year train same as first. Third year erect a trellis about like those recommended by Mr.

Fuller, Dr. Fisher and other worthies—with posts eight feet long set two and one-half feet into the groued, the end post to be at the first vine, the next post nine feet therefrom and the others six feet apart, bracing the outside post. Rows eight feet apart, vines six feet apart in the rows. Stretch No. 15 or 16 of galvanized wire upon these posts, the lower wire twenty inches from the ground, the next wire fifteen inches above the first, the third fourteen inches above the second, and the fourth fifteen inches above the third, ending the trellis with the fourth wire. Beginning with the third year, allow one shoot to grow from each vine. The end vine of the row train to and along the third wire, the arm turning from the post. Next vine carry to the first wire, the next to the third and so on alternately through the row, all the vines turning the same way. As they grow, nip the laterals at second leaf, when the shoots have grown six feet nip the ends off. The autumn pruning consists in cutting off the laterals and cutting back the main shoot to good, strong wood.

At the fourth year as buds push a shoot each, if two rub out one, and show their clusters of grape buds, and have made two or three leaves beyond the last cluster, the end of these shoots should be nipped off as soon as they have made sufficient growth and are strong enough not to break, tie them to the second or fourth wire as the case may be. As laterals start on the upright shoots, pinch in at second leaf and continue to do this the entire season. Now the question comes, how much fruit shall I let remain on the vines? Shall I allow each shoot to start with three or four clusters and at the close of the season have a very large crop of half grown, unripe grapes with which to crowd the market with Concords at one dollar per bushel, as has been the case the present year, or shall I aim for a harvest of large, well ripened berries, upon clusters weighing from half a pound to one pound each, selling at remunerative

prices the purchasers saying these grapes did not grow out of doors, how is it that you grow better grapes than any one else? I can show you a man to whom a dealer has within a month offered twenty cents a pound for Concord grapes. Quality rules. At the same time we are caring for this year's crop we must have a good look out for the next one. Upon the vines where a strong bud starts, the shoot from it should be trained up and along the wire in an opposite direction from the bearing arm except the vine planted at the end of the row. This vine's fruiting arm as also its arm for next year's fruiting is to be turned the same way, take good care of the young arms for from them comes your next year's crop. Pinch out the laterals at second leaf, and if they start again repeat the operation, stop the shoot when six feet in length.

The fifth year we do as we did the fourth, excepting the first vine in the row, the bearing arms grow one way and the growing arms the other, thus the vines are renewed year by year.

A vineyard properly cared for is surely good for this generation and the next, and I believe for a longer period.

The varieties I should recommend for Essex County are Concord, a few Delawares, try Worden's seedling and John B. Moore's Early Black when he will let you have them.

A word about Peach culture. My soil is same as for grapes, fertilizing also same as for grapes substituting salt for bone. I have about one hundred and fifty trees in bearing planted eight years ago. In 1872 I had fifty bushels of good fruit, in 1874 one hundred and thirty bushels of first rate fruit. In 1873, in an orchard of about one hundred trees, the yellows appeared and are spreading through the orchard. The rule should be if a tree is affected by it immediately remove and destroy it root and branch. A liberal use of salt and unleached ashes may be a preventative,

## FLOWERS.

The Committee are happy to record a very fine display which surpasses previous years. We were glad to welcome the old friends, Messrs. Higgins and Capers of Newburyport, but we missed this year the familiar face and fine exposition of Mr Gregory of Marblehead. A new name however is added to our list of contributors, that of Mrs. L. P. Weston of Danvers to whom the Committee unanimously voted the first premium for general display. The variety and the perfect taste shown in the arrangement of this collection we have never seen excelled, we hope to welcome Mrs. Weston every year in this department of our exhibition.

Among other contributions that call for a special word were the Dahlias from J. Henry Hill of Amesbury, the Pansies from Charles R. Anderson of West Boxford, and the unsurpassed collection of wild flowers from Mrs. W. S. Horner of Georgetown. The collections of pot plants from Harmony Grove Cemetery at Salem were extensive and fine.

The Committee would suggest a little competition in parlor and hand bouqets, also in floral designs. Where there are but one pair of each of the above bouqets and only one design, it makes the duties of the Committee too easy.

We would again urge upon the Trustees the importance of a special premium for Gladiolas, Asters and Lilies, a fine collection of which were offered this year for which your Committee could only award Gratuities. This is not as it should be, therefore we would recommend and urge the offering of premiums next year.

For the Committee,

J. F. WEST.

PREMIUMS.

Thomas Capers, Newburyport, best pair Parlor Bouquets, $ 3.00
John C. Higgins, Newburyport, best Hand Bouquets, 2.00
Mrs. C. H. Buxton, Salem, best floral design, 2.00
Mrs. James M. Perry, Danvers, best dish cut flowers, 2.00
J. Henry Hill, Amesbury, best 12 dahlias; Mrs. L. P. Weston, Danvers, best 12 petunias; Charles R. Anderson, West Boxford, best display of pansies; Mrs. Joseph Hadley, Gloucester, best 12 phlox; Miss S. P. Towne, Middleton, best 12 verbenas; Mrs. W. S. Horner, Georgetown, best dish native flowers, $1.00 each. Mrs. L. P. Weston, Danvers, largest and best display from one individual, $4.00.

GRATUITIES.

Harmony Grove Greenhouse, finest display of pot plants, $ 4.00
Thomas Capers, Newburyport, general display of flowers, 2.00
John C. Higgins, Newburyport, general display of flowers 2.00
David Haskell, Georgetown, 3 ferneries; Peter Wait, Danvers, 2 vases asters; Mrs. C. H. Buxton, Salem, 1 stand dahlias and one dish flowers; Mrs. S. L. Hammond, Danvers, Cuban Wax plant, $1.00 each. E. F. Hill, Peabody, 2 dishes pansies; J. H. Sears, Danvers, vase fringed gentian and pitcher plant; Miss M. Louisa Walton, Mrs. L. A. Mudge, Mrs. S. Fuller, Mrs. J. W. Tapley, Miss Etta Ropes, Miss S. B. Cross, Master Frank E. Lord, Mrs. E. M. Lowe, T. Hawkes, C. Hammond, Miss Helen Bacon, Mrs. G. W. Kenney, Mrs. Geo. W. Hood, Master Charlie A. Spofford, Danvers, Miss Abby F. Wilson, Peabody, bouquets; Mrs. John Colcord. Peabody, David Mighill, Georgetown, George B. Dodge, Hamilton, bouquets of wild flowers; Mrs. Mary E. Fuller, Middleton, 51 kinds of wild flowers; Mrs. John A. Hoyt, Georgetown, bouquet,50 cents each. J. Henry Hill, Amesbury, lilies and gladiolas, $1.00. Mrs. Hannah P. Towne,

Danvers, Pansies,; Miss Mary E. Porter, Danvers, 2 fuschia plants; Dea. S. P. Fowler, Danvers, 1 magnolia plant; Miss Mary B. Mudge, basket of flowers; Mrs. E. T. Waldron, vase do. Mary D. Stimpson, basket of dahlias; Master Geo. R. Mayhew, basket of flowers; Mary C. Tapley, dish of wild flowers; Mrs. P. J. Wait, bunch of wild flowers; Lizzie Hood, Pansies; Mrs. L. A. Mudge, handsome pinks; Mrs. John Swinerton, Danvers, dish of flowers; Mrs. W. P Barker. Peabody, house plants; Mrs. Matilda Webster, Peabody, bouquet; Mrs. David W. Low, Gloucester, basket of flowers; Mrs. Charles Perley, Boxford, dish of verbenas; Mrs. B. F. Sylvester, Danvers, bunch and basket of asters; Mrs. Martha A. Esty, Middleton, rubber plant; Mrs. A. B. Rundlett, Danvers, boquet; Mrs. Rufus Hart, Danvers, fern case; Mrs. W. S. Horner, Georgetown, bunch of wild flowers; Frank C. Clough, Peabody, Jerusalem cherry tree; Mrs. J. B. Marston, Danvers, Jerusalem cherry tree; Mrs. E. T. Waldron, Danvers, wreath of wild flowers; 50 cents each.

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## VEGETABLES.

There were eighty-five different lots of vegetables in the exhibition of this year. Most of these embraced several varieties, one as many as fifty-two, and another sixty-three kinds. The onions and squashes were exceptionally fine. It is to be regretted that the diameter of from three to four inches required by the regulations deprived of their chances of taking the premiums several of the smaller sized lots of onions which were really finer specimens than the lots which received the awards. I would therefore suggest that the diameter required be changed from three to four inches to from two and one-half to three inches.

While on this subject I would farther suggest the following addition to the regulations :—"no competitor for premiums to exhibit either more or less number of specimens of any vegetable than the premiums are offered for." At present some exhibit three times the number for which the premium is offered, others just the number, as a consequence the tables are unnecessarily burdened, while the exhibitor of the larger numbers has a proportionate larger number of chances for the premium in his favor which, as the Committee in such cases naturally select the very best of each lot, when considering the matter. It is very obvious that there must be some limit to the number of specimens on exhibition, and as experience has decided that the number selected by the Trustees is sufficient to enable the public to determine the standard, why not have that number the limit? This plan of ours of limiting the size of premium specimens to what experience has proved to be the correct standard, is working admirably, as any one must perceive who has in mind the medley variety in size of the same vegetables which were to be found at our exhibitions of a dozen years ago.

What is a Sugar Beet? By the agricultural public, and even by the agricultural papers which profess to be teachers of the public, the term Sugar Beet is almost always misapplied. One of our agricultural papers recenly in a long editorial, written with the avowed object of making clear to the uninstructed mind the difference between a beet and a mangold wurtzel, ased that the sugar beet grew to the length of about fifteen inches! The term Sugar Beet is an unfortunate one, as the word Sugar had already been appropriated to express the sweet flavor of the varieties of beets raised for table use, while the word Beet is strictly a misnomer, the vegetable sugar beet being in reality a mangold wurtzel. A generation ago our fathers used the term Sugar as a familiar designation for any sweet variety of beet raised for table use, and at the present time by the great

majority of the public the term is still so used. As the new industry of manufacturing sugar from the beet grew on the continent of Europe, seedsmen were called upon to supply for commerce seed of the best variety for this purpose. It was necessary that this variety should be as free as possible from all coloring substance as all this would as a matter of course give a stain to the juice, and impose on the manufacturer the labor of purifying it. The one at first selected was the long, white mangold wurtzel and this was called the sugar beet in commercial parlance. This white mangold was not entirely white, the portion of it that grew above ground being usually colored a light green by exposure to the sun's rays. It became therefore an object for the manufacturer to still improve on this mangold to the end that all the coloring matter in the root should be eliminated. The intelligence and enterprise of the seedsmen of Europe responded to this want, and in the course of a few years two prominent varieties of mangold were produced that have nearly completely satisfied it—one of these was sent out by the estimable house of Vilmorin Andrews & Co., of Paris, and is named "Vilmorin's hew Improved White," and the other "White Imperial Extra" by the distinguished German house of Ernest Benary.

These improved sugar beets of commerce grow nearly entirely under ground. They are called beets but are so only in a generic sense, just as the green fleshed melons are included in the word muskmelon when that word is used in a generic sense, though at the same time we know that by the muskmelon in the familiar language of the family we mean only the mealy, yellow fleshed variety. When grown these beets define themselves to be the mangold variety by the coarser structure of the root, the stouter ribs of the leaves and the greater coarseness of the leaves, which spring in larger masses directly from the crown than is the case with the beets for the table.

The moral of all this for my for my farmer friend is that if you want a beet for table use do not order seed of the sugar beet or you will be very likely to find a mangold growing in your garden, a return but not a recompense for the sweat and toil of the husbandman.

The following awards were made :—

J. J. H. Gregory, Marblehead, early turnip beet, $3 ; rose potatoes, $3 ; late sweet corn, $3 ; Hubbard squash, $3 ; green fleshed melon, $2 ; musk melon, $2 ; spherical tomato, $3 ; dish of tomatoes, $3 ; greatest variety, $3. S. A. Merrill, Danvers large sweet blood beet, $3 ; red onion, $3 ; Cauliflowers, $2 ; early sweet corn, $3 ; round tomatoes, $3. M. F. Batchelder, Peabody, long orange carrot, $3 ; parsnips, $3 ; marrow squashes, $3 ; Butman squashes, $1 ; drumhead cabbage, $1 ; vegetable egg, $1 ; sweet herbs, $1. Thomas E. Green, short horn carrot, $3 ; C. O. Putnam, Danvers, mangold, $3 ; Savoy cabbage, $3 ; Turban squashes, $3. Hiram A. Stiles, Middleton, sweet long turnip, $3 ; cranberries, $3. J. P. Goodale, Peabody, yellow ruta baga, $3 ; Marblehead squash, $3. R. T. Jaques, Newbury, Danvers onion, $3. R. Jaques, yellow flat, $3. Henry Bushby, Peabody, peerless potatoes, $3 ; Fotler cabbage, $3. Charles R. Anderson, Boxford, Fotler cabbage, $2 ; cauliflowers, $3. G. W. Rogers, Peabody, celery, $2. James M. Perry, Danvers, field corn, $3. David W. Low, Gloucester, water melon, $2 ; cranberries, $1. W. K. Cole, Boxford, cranberries, $3. Andrew Curtis, Peabody, crookneck squashes, $2 ; lot of oats, $1 ; sweet corn, $2. Horatio Perry, Danvers, Savoy cabbage $1 ; C. S. Potatoes, $1. S. F. Potter, early rose potatoes, $1. G. H. Wood, Danvers, pumpkins, $2. A. G. Blake, onions, $2. H. G. Abott, onions, $1. T. E. Green, mangolds, $1. J. P. King, Peabody, turban squash ; David Wentzell, Salem, mammoth squash ; Charles R. Anderson, Boxford, S. M. peppers ; Charles

R. Anderson, Boxford, sweet corn; Samuel Hawkes, Saugus, cranberries; Alden C. Estes, Rockport, cranberries; Nathan Bushby, Peabody, corn; W. H. Fuller, Middleton, crookneck squash; Aaron Low, Essex, sweet corn, $1 each. A. P. Noyes, Middleton, soap, $2. J. J. H. Gregory, Marblehead, collection of garden seeds, first premium, $8; Clarence Brown, collection of garden seeds, second premium, $5. Aaron Low, Essex, collection of garden seeds, gratuity, $2.

For the Committee,

J. J. H. GREGORY, Chairman.

SPECIAL PREMIUMS BY F. H. APPLETON.

The Committee on Collections award the first premium of $15.00 to S. A Merrill, Danvers; second premium of $10.00 to J. J. H. Gregory of Marblehead.

*Committee*—D. H. Stickney, E. G. Berry, W. A. Durant, Eben King.

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## COUNTERPANES.

The Committee on Counterpanes, Carpetings and Rugs consisted of Mrs. G. A. Tapley of Danvers, Mrs. E. P. Robinson of Saugus, Mrs. Aaron Low of Essex and Miss Mary Lambert of Rowley. There were eighty varieties submitted to the Committee which they examined with much care, and after consultation unanimously awarded to Mrs. A. B. Jenness, Danvers, first premium, $4; Mrs. H. Smith, Salem, second premium, $2; and gratuities of $1 each to Mrs. J. Q. A. Batchelder, Danvers; Mrs. John Perley, Bradford; Mrs. Wm, F. Shepard, Hamilton; Mrs. J. C. Stanley, Beverly; Lizzie M. Wilson, Danvers. Fifty

cents each to Mrs. Mary L. Lee, Beverly; Mrs. M. L. Putnam, Danvers; Mrs. Joseph Currier, Danvers; A. F. Lyford, Danvers; M. Waite, Danvers; Joseph H. Ober, Beverly; Joseph Bushby, Peabody, for Counterpanes.

For the best Rug, Mrs. Elnathan Dodge, Danvers, first premium, $3; Mrs. Charles P. Lefavour, Beverly, second premium, $2. Gratuities of $1 each to Mrs. Charles Annable, Salem; Lenora Moore, (aged 15) Salem; Mrs. H. P. White, Danvers; Mrs. Samuel Legro, Peabody; Mrs. W. E. Dodge, Wenham; Phebe A. Cross, Danvers; Ruth M. Jacobs, Peabody; Ella P. Perry, Danvers; H. T. Anderson, West Boxford; Jessie Fowler, (11 years.) Gratuities of fifty cents each to Hattie L. Hill, Salem; Mrs. John Berry, Danvers; Mrs. Levi Fish, Danvers; Mrs. Jas. Pike, Danvers; Mrs. Betsey Loud, Danvers; Mary E. Davis, Topsfield; E. G. Hadley, Danvers; Mrs. Porter Cheever, Danvers; Marianna M. Blanchard, Lawrence; J. P. King, Peabody; Carrie W. Trask, Beverly; Abbie Dodge, Beverly; M. A. & E. Cressey, Salem.

There were no specimens of carpetings submitted to the Committee.

For the Committee,

ALFRED KITTREDGE.

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## ARTICLES MANUFACTURED FROM LEATHER.

The Committee award to A. C. Saunders of Haverhill the first premium of $10, for three canes manufactured from leather. Also a gratuity of $5 to Samuel G. Bazin of Danvers, for two calf skins tanned with the hair on.

The Committee regret the small show of articles under this head, and would recommend that an effort be made to have this department of the Show better represented in succeeding years.

*Committee*—Thomas J. Clark, Milton G. Tenney, Joseph Knowlton, John I. Ladd.

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## MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufacturers and General Merchandise most respectfully recommend the award of the following gratuities, viz :—

James M. Bruce, West Townsend, street lanterns; A. P. Noyes, Middleton, soaps; A. A. Pearsons, Woburn, magic and electric threaders, $2 each. C. Houghton, Danvers, case of denistry, $1.50. W. S. Gray, Danvers, Sorrento carvings; J. H. Carlton, Haverhill, folding table; Anna L. Roche, handkerchief box; N. P. Merriam, Danvers, case of shirts, $1 each. Frank B. Trask, Danvers, Matress; Jasper B. Pope, Danvers, watch case etc.; Miss H. Gray, Beverly, pottery; George Pratt, Danvers, brackett; George F. Priest, Danvers, book rack and carvings; Frank Mack, Georgetown, bracket; Willie A. Shirley, Danvers, book rack; Charles E. Kelley, Danvers, cigar stand, etc.; Woodman & Co., Danvers, paper boxes; Harvey Galucia, Peabody, rustic baskets; A. C. Saunders, Haverhill, jewel box; John Learoyd, Jr., Danvers, bracket; 50 cents each.

The mechanical invention of the folding table exhibited by J. H. Carlton, of Haverhill; the vesper street lantern by J. M. Bruce of West Townsend and the electric and magic threaders by A. A. Pearsons of Woburn are ingenious and useful inven-

tions, and are worthy of special recommendation for the uses for which they are designed.

*Committee*—James V. Smiley, H. F. Ladd, Charles Ingalls.

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## FANCY ARTICLES.

For the best work performed by a child under twelve years of age, we award the first premium of $3 to Hattie Bell of Danvers; Gracie H. Putnam, Danvers, second premium, $2; M. M. Blanchard, Lawrence, gratuity, $1.

Gratuities of $2 each to Mary H. Weston, Danvers, paintings; C. H. Masury, Danvers, plaster tablet. $1.50 each to Mrs. E. G. Berry, Danvers, oil paintings; M. P. Needham, Peabody, do.; Frank E. Lord, Danvers, motto and sofa pillow. $1.00 each to Sally T Mason, Lynn, wreaths of fish bones and feathers; Nellie A. Magoun, Danvers, picture; Evelyn A. Fellows, Danvers, 2 pictures; Clara P. Hale, Danvers, motto; Charlotte Turner, Danvers, picture; Mrs. A. H. Sylvester, Danvers, embroidered blanket; Augusta Lamson, Beverly, embroidered cushion; Fannie P. Mudge, Danvers, tidy; S. S. Learoyd, Danvers, embroidered sack; C. A. Perley, Danvers, pictures; Rosie Grey, Danvers, cushion and mat; Sally Chase, Newburyport, pair knit hose; Lizzie G. Boardman, Danvers, toilet cushion. Seventy-five cents each to Ella M. Bradstreet, Danvers, pair of pillow shams; Eliza Trask, Danvers, embroidered skirt. Fifty cents each to Martha O. Barrett, Peabody, pen marking; Laura M. Driver, Lynn, ottoman; Bel Tapley, Danvers, tidy. Eleanor R. Putnam, Danvers, toilet mats; Mrs. Porter Legro, Danvers, skeleton wreath; Lester H. Couch, Danvers, worsted work; An-

nie D. Hall, Danvers, tidy; R. T. Wyatt, Danvers, sofa pillow; Hattie Tapley, pincushion; Mrs. S. B. Hunt, ottoman cover; Lillie Perry, cushion; Mary C. Tapley, toilet work; Mrs. John Preston, 2 pairs woolen hose; Helen P. Tapley, cushion; Emma F. Tapley, picture frames; Mrs. L. E. McLoud, sofa pillow; H. A. Learoyd, embroidery; Miss S. S. Learoyd, pillow shams; M. J. Crosby, Georgetown, pillow shams; Jay O. Richards, Danvers, motto; Bertie C. Richards, Danvers, motto; Rhoda A. Risk, Groveland, skeleton leaves; Annie S. Porter, Danvers, cushion and cornucopia; Annie E. Shirley, doll's quilt; Mrs. A. M. Eaton, tidy; Ella M. Perley, tidy; Mrs. Alfred Fellows, embroidered skirts; Isabel Gould, Middleton, stuffed birds; Sarah Gould, wax flowers; Cara Buckley, Danvers, pith cross; Mary A. Conlon, Middleton, ottoman; Mrs. D. J. Preston, Danvers, seed bag; Fred B. Oakes, motto; Mrs. A. Viles, pair pillow shams; Nellie Kelley, motto; Bell A. Waldron, Wenham, tidy; Miss H. C. Goodhue, Danvers, ottoman cover; Martha Barrett, Peabody, oil painting on tin; Etta P. Ropes, Danvers, foot rest; C. B. Johnson, ottoman and chair; A. A. Learoyd, ottoman; Julia England, ottoman cover; M. W. Putnam, ottoman cover; Susie W. Higgins, Middleton, ottoman cover; Ada A. Putnam, Beverly, carriage robe; Putnam and Barnes, Danvers, specimens of printing; Fannie F. Putnam, lamp mat; Master George O. Stimpson, wax flowers; Mrs. Mary Stimpson, paper wreath; Abbie Pettengill, braid work; Andrew Nichols, Jr., box of silk cocoons; E. F. Wilson, Peabody, embroidery and frames; Emily Witham, Danvers, motto; Abbie Radcliff, tidy; Abbie J. Bazin, tidy; Annie N. Bushby, Peabody, tidy.

We would also mention a fine display of sea shells by Mr. J. H. Smith of Newburyport; a cushion by Mr. Wm. E. Cary of Danvers, and a parlor mat by Mrs. Albert Gould of Peabody.

*Committee*—Andrew Nichols, S. J. Wight, A. F. Low.

## IMPROVING WET MEADOW AND SWAMP LANDS.

The undersigned, members of the Committee, met July 5th to view a piece of meadow or swamp land entered by Mr. Samuel Dane of Hamilton. The piece, containing about six acres in all, is divided by an open ditch into two lots, measuring respectively about four and one-half and one and one-half acres. The land before being improved was a wet, soft muck ten to fifteen feet deep, about one-half wooded with old maple and pine stumps, the remainder covered with bushes and brambles. It emitted an offensive and miasmatic odor and was entirely worthless. The main ditch through the piece above spoken of was dug before Mr. Dane bought the place, as well as some other ditches leading into it; but these ditches were rendered almost useless by obstructions at the outlet—subsequently removed by a change in the adjoining highway.

On the small piece Mr. Dane commenced work in 1869, by cutting down the hassocks and digging cross ditches to the main drain at intervals of twenty-five feet. Having thus leveled and drained the surface, he covered it with gravel from the adjoining high lands to the depth of three or four inches, and sowed grass seed. With only this treatment and no manure of any kind, the crop is stated to have been two tons per acre for each of the last five years. The crop of this year was standing, and was estimated by the Committee to come fully up to this standard. Mr. Dane gives the cost of ditching, leveling etc. as $25; the cost cost of gravelling as $45; cost of seed $4, and of cutting and saving the hay as $5 per ton, or $75—a total cost of $149.00

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|---|---|
| A crop of two tons per acre an one and one-half acres for five years would be fifteen tons in all, which at twenty-five dollars per ton amounts to - - | 375.00 |
| Leaving a profit of - - - - - | 226.00 |

Work on the large piece was commenced in 1870 and has been continued to the present time as opportunity offered. The deep, wet footing, the almost impervious bramble thickets, and the size and toughness of the stumps and buried logs made the task as difficult as could be found anywhere. Ditches were to be dug, bushes and brambles cut out and destroyed, hassocks leveled, stumps and tree trunks to be uncovered, cut to pieces, raised and hauled off, and the piece converted from a nasty jungle to a productive field. This has taken time and money, and is not yet completed—the four and one-half acres being in all stages from work just begun on one side to the growing crops on the other. Much of the wood and roots had to be burned with the brush, but a good deal has been saved and sold or used.

On the side of the piece first cleared, gravel from the bank near by was carted on to the depth of three or four inches, over the space of about one acre, a small quantity of fish compost spread and harrowed in, and grass seed sown. Mr. Dane states the produce of this acre to have fully equalled for the past five years what it was when the Committee saw it, and estimated it to be two and one-half tons of hay, some of the stalks being over five feet in height. Grass seed has been sown on other parts of the piece, which have been drained, cleared and leveled but not graveled or manured, but the crop is sickly and of small value. Corn and vegetables have also been cultivated, but without much success. The soil of such a place is too sour and cold to grow crops without the application of some amendment.

Mr. Dane gives his outlay and returns on this four and one half acres as follows :—

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|---|---|
| Labor of ditching, getting off wood and stumps, grubbing up and gravelling, harrowing and seeding, - | $230.00 |
| Cost of Seed, - - - - - | 9.00 |
| Compost and labor of applying, - - - | 8.50 |

| | | |
|---|---|---|
| Cutting and harvesting Hay, | | 75.00 |
| Total, | | 322.50 |
| Value of Maple Wood at $6.00 per cord, | | 200.00 |
| " Pine " 3.00 " | | 50.00 |
| 12 1-2 Tons Hay at $25.00 per ton, | | 312.50 |
| Total, | | $562.50 |
| Net Profit, | $240.00. | |
| Total Net Profit on the Six Acres, | | $466.00 |

The Committee saw enough to enable them to judge that the crops were not over estimated; but for the amount of work which must have been done they think Mr. Dane's estimate of cost is too low. Mr. Dane kept no account at the time, not expecting to enter his land for premium, and he depends much on memory for the details. He states however that a large part of the labor was done in the winter, and at very cheap rates. But the excess of profit shown by the above statement is large enough to cover a much higher estimate of cost, and even if we should allow the expenses to be as great as the return, which cannot possibly be the case, the increased value of the land, and the removal of the former offensive and unwholesome exhalations are sufficient to make the work remunerative.

The Committee however cannot withold their belief that open ditches, such as Mr. Dane has dug, are the poorest way of draining wet lands. They soon become obstructed by the caving in of the soil and the accumulation of vegetable matter, so as to prevent the free passage of the water, and the work has to be done over again, or the land and crops relapse into the poor and valueless condition from which they were temporarily reclaimed. Good, permanent work is almost always the cheapest in the end, and a drain of tile or stones properly laid will far outlast the open ditches, be more effective, allow the passage of teams,

make cultivation easier, and be finally the most economical.

Already parts of the ditches on this meadow are so choked as to be unequal to the work they ought to do, and in such places the cultivated grass is giving way to the coarse and reedy herbage natural to wet localities. Still, so far as it has been completed the Committee judge Mr. Dane's experiment in great measure a success, and an encouragement and example to others in the County who possess such lands, and they have no hesitation in awarding him the first premium of $15.00.

*Committee*—Henry Saltonstall, Daniel J. Hale, Amos Poor.

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## IMPROVING PASTURES AND WASTE LANDS.

The Committee on Improving Pastures and Waste Lands respectfully submit the following report :—

The Committee were invited to visit but one farm, that of Joseph Horton of Ipswich, whose statement accompanies this report. They recommend the award to him of the first premium of $15.00. Owing to an unusual delay in the receipt of the notice, your Committee did not see the crop growing, but are of the opinion, after examination of the hay and ground, that he has not over-estimated either the amount or quality of the crop. His method of preparing the soil commended itself to your Committee from the fact, that by the aid of a steel plough and a yoke of oxen, he has accomplished more and in a shorter space of time than could have been accomplished by six oxen and as many men by the old method. This lot compares favorably with the average Ipswich fields, that is smooth enough, every rod of it being readily mown with Wood's machine. The ashes

were probably worth more than a ton of any commercial fertilizer of the present day, judging by results. Immediately adjoining this lot, Mr. Horton has a piece of about two acres, although not entered for a premium, deserves a passing notice, as less than a year ago it was covered with bushes and brakes, and now it is in an excellent condition to seed down. Also, two acres more in different stages of improvement, on which the funeral piles were burning and smoking.

*Committee*—Geo. W. Chadwick, Wm. A. Brown.

STATEMENT OF JOSEPH HORTON.

In competing for the Society's premium offered for the best conducted experiment in renovating and improving waste lands so as to add to their agricultural value, I offer for your consideration the following statement :—

The land upon which I operated was about two acres of old pasture. The surface was raised into ridges and hillocks, and for the most part covered with bushes. Treatment—by ploughing I leveled the ridges, and tore up the bushes, getting out what roots I could. I then carted the whole into a pile and started a fire, which I kept going until all were consumed. The field was then ploughed again and seeded to grass, nine cart loads of ashes, the amount obtained from the fire, being applied for dressing.

By this way of treating, I have been enabled to get one ton per acre of No. 1 hay from land that was nearly worthless for pasturing. This method has decided merit over all others that I have tried, as it thoroughly and at once clears the land from all noxious growths, works the soil, leaves it in such a condition that it can be treated readily and in a first class manner and, as it supplies its own manure, comparatively cheap. In regard to the chemical properties or value of these ashes I can give no in-

formation, I simply know that the land upon which they were used does well and as yet shows no sign of running out.

EXPENSE OF IMPROVING PER ACRE.

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|---|---|---|
| Ploughing off sods and bushes, | $ 3.00 | |
| Carting " " " | 10.00 | |
| Ploughing again and preparing for seed, | 7.00 | |
| Seed, - - - - - | 1.50 | $ 21.50 |

## UNDERDRAINING LAND.

The Committee on Underdraining report, that there is but one entry, and they award the first premium, $15 and Diploma, to J. J. H. Gregory, of Marblehead.

The Committee take pleasure in calling the attention of the Society to the annexed statement of Mr. Gregory, and they suggest that the farmers of the County might learn much, by a visit to his farm, which cannot readily be put into this report or statement. Although the work of underdraining is necessarily a buried work, still its effects are plainly visible on the surface, and must be seen to be fully appreciated.

The Committee visited Mr. Gregory's farm on the 11th of October, after heavy rains, when they found the low muck lands so well drained, that they were in good condition for any treatment —some of this land with crops of cabbages still standing, and other parts covered with lately pulled onions left to be dried, where probably, without drainage, they would be flooded.

As will be seen by his statement, Mr. Gregory did not enter a single piece of land of uniform character, but the entire tillage land on the farm, which comprises nearly every variety of sod, the most of which he has underdrained with nearly equal

benefit to all.

Underdraining may be classified as follows :

1. Thorough drainage.
2. Partial drainage.
3. Sufficient drainage.

The first as the word implies, affects equally every part of the land,—has no open ditches and but one "outlet." It usually requires the services of an engineer, and is a very nice and somewhat expensive piece of work,—as for instance a large field of clay land, whether lying low or not, and without regard to its condition as to wetness from springs, may be more profitably treated by thorough drainage than by any other system. The rule usually prescribed for this kind of drainage is, tile laid not more than thirty-three feet apart and as nearly three feet deep as the nature of the ground and the drop of the outlet will admit. Its cost at prices of labor since the war is not far from $100 per acre.

2. "Partial Drainage" is such as only partly or imperfectly secures the object aimed at, although it often does much good, as when one drain is placed through the middle of a piece of land, leaving parts on either side that may be full of springs—or where no sufficient fall can be had to secure a proper outlet. This kind is to be tolerated only when the exigences of the case permit of nothing better.

3. "Sufficient Drainage," may be described as that which completely secures the object without any unnecessary expense. For example—a field of sandy loam, upon a subsoil of gravel, would ordinarily be considered as sufficiently drained by nature, and yet it may be kept too wet by a spring of water in its higher part. To tap this spring and draw its water in the most direct line to the nearest available outlet would be sufficient. Sufficient drainage is the kind which Mr. Gregory has applied with admirable judgment and complete success.

As for the kind of tile to be used, the Committee are of opinion that round tile with collars are preferable to those used by Mr. Gregory. The first cost of these tiles is but little more and much less expense for labor and materials is required to fix them in place and hold them in line. The collars serve the double purpose of holding the joints immovably in line and protecting them against the passage of sand or other matter. These points are of the greatest importance in work which is to be buried from sight, and which is intended to endure for many years.

D. F. APPLETON, Chairman.

STATEMENT OF J. J. H. GREGORY.

The underdrained land I enter is located on the Glover farm, Marblehead, near the junction of the roads to Salem and Lynn. The portions drained embrace several tracts, viz:— gravelly loam underlaid by hardpan, muck meadow underlaid by clay; and a strong clay soil increasing in stiffness until at a depth of about three feet a good brick clay is reached. An open ditch runs through the middle of the farm and the various drains open into this. The draining has been done almost wholly by tile, a part the horse shoe, but mostly the sole tile, as those having a bottom are called. These have been laid at depths from the surface varying from three to four feet. In draining the gravelly portion near the barn, I began about three hundred feet above the lowest place, opening my drains about thirty-two feet apart, and laying two inch tile, which emptied at right angles into five inch, the latter into the main ditch, with this one exception all the tile opened directly into the main ditch. The entire length of tile laid was about four miles. Following directions given by theoretical writers, who drain more on paper than on soil, I procured a lot of English draining implements which proved utterly worthless in our hard pan, however well they might be made to work in the clays of England. I found one of

the greatest wastes of labor, which greatly augmented the cost, in the habit my men had acquired of digging wide ditches. The ditches having been excavated at the required depth, a half of a hard brick was firmly set where the ditch ended, and against this one end of the tile was closely set to prevent the soil working in with the water. The tile (those well baked having been carefully selected) were placed end to end as closely fitted as possible, until the open ditch was reached. Small stones were firmly wedged between each side of each tile and the side of the ditch to keep them in line, and a forkfull of eel grass, which is almost indestructible, dropped over each joint. When the quantity of water to be carried off was very large, small stones to the depth of three or four inches were carefully placed over the tile, and these were covered with eel grass. The soil was put on with great care to prevent any breaking of the tile and so consequently destroying the drain. In putting on this first layer of soil I had a man stand in the ditch and taking the earth from the sides carefully place it. On the muck-meadow, where the bottom of the ditch did not reach the clay, I laid hemlock boards about six inches in width. The ditches on the clay soil were dug to a depth of over three feet; I am satisfied that this was a mistake, and if they had been dug to a depth of two feet and a half, and been put as near again together, they really would have been more satisfactory. In reclaiming some of the tracts I found that ditches conveying the water from the springs which drained them directly into the main open ditch was all that was necessary. Some acres of muck-meadow were by this means drained sufficiently dry without the systematic placing of tiles every two rods. In one instance where a ditch came near a wall where plenty of small, loose stones had accumulated in the course of many years dumping, I had the experiment tried of using these in place of tile, with reference to determining the comparative cost. The result was decidedly in favor of the tile; the great

deal of handling of the stone made necessary in collecting them and selecting the smaller ones for the water course, and the slow care necessary in placing and covering these, required extra time the value was far more than an offset for the cost of the tile.

The general result of this extension tile draining has been to bring under successful cultivation many acres that had never before been cultivated, and to so drain drowned areas of their superfluous water that some of the best tillage land now on the farm embraces tracts that previously could not be relied upon for a crop oftener than one year in two. To sum up briefly the whole matter—it brought into excellent tillage condition a farm previously notoriously wet and cold. I close with a suggestion to my brother farmers—don't expect too much from your underdraining the first one or two years, it will take that time for most of the water in the saturated earth to find routes to the tile, and so complete the underground system of drainage.

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## MANURES.

The papers tell a very readable anecdote of an indulgent old father, who prided himself on always having his commands obeyed. When wearied with ordering his careless son to execute his commands, he was accustomed to wind up with "well, then I will go do it myself, for I will be obeyed!" So the chairman of this Committee having waited with all patience in vain for some member of the Society (and where can be found a more inteliigent body?) to hand in the results of his experiments on manures, and having looked to the right and to the left for a "report," rather than have his department dishonored and so respectable a subject go by default, has resolved to "do it himself"

—hence a leaf from my personal experience in the preparation and application of manures.

There is an idea, very generally prevalent in the community, that, though other substitutes may do for an emergency, yet to keep up the fertility of the farm through a long series of years barn yard manure, by which is specially meant that of horses and neat stock, is, after all the only reliance. I believe that this sweeping assertion can be shown to belong to the popular class of errors, though countenanced very generally by the agricultural press, and by the agricultural writers of the popular type. To demonstrate that the agriculture of the farmers of an entire community is carried on and that most successfully too, with but little dependence on the manure of the barn yard as a fertilizer, I will instance the practice of the farmers of Marblehead extending over a period of more than twenty years. Their crops are mostly early potatoes, cabbages, squashes and onions, vegetables which require the very highest feeding to give first class crops, and these enterprising tillers of the soil are well known to fame as a class who are contented with nothing less than first class crops, and when they fail in growing these the cases are exceptional. As a body, beyond one or perhaps two cows for family use they keep almost no stock in addition to that needed to carry on the work of the farm. These consist of from two to four horses, or in the place of two of the horses, a yoke of oxen. From such resources it will be seen that there can average but about half a dozen cords of home made, barn manure annually. Of barn yard manure from other sources some of them on an average purchase three or four cords a year, while half of them do not purchase any at all. Now these farmers will average as many as five acres each in vegetable crops, and their average application of manure is certainly as high as from eight to ten cords to the acre.

It will be seen, then, that while the average use of barn yard

manure is less than ten cords each by the farmers of Marblehead, the average quantity of manure used by them is forty cords or more. We find here, then, a community who, in refutation of the old axiom that barn yard manure lies at the basis of successful agriculture, have for twenty years kept their soil in the highest state of fertility with but little dependence upon it, while they are known by their crops far and wide as successful market farmers. How they have accomplished this, what plant food they use as a substitute and how they prepare it for the soil does not come within the sphere of my article, and I will therefore pass on to give a single illustration from my own experience how a large crop of cabbages were successfully raised without any help from barn manure.

In the spring of 1874 I broke up in an old pasture, wherever I could find sufficient depth of soil among the ledges, about three acres of rough hill-top and sides. As the road up the hill was very steep, making the teaming of common compost a very difficult matter, while six hundred cords on various fields of tillage had about exhausted all resources in that direction, I was more than half compelled to use concentrated fertilizer as a substitute. I chose hen manure, ground bone, and German potash salts. The hen manure was collected in town at a dollar a barrel, the bone was a part of about thirty tons of bones that had laid together until about rotten and were then ground in a bark mill, which I purchased at from twenty to twenty-five dollars per ton. These had been offered in neighboring towns in large or small lots and yet there were found but two purchasers sufficiently intelligent or enterprising to invest in them at this low figure! I am happy to say that our Vice President, Dr. Loring, was one of these, the name of the other gentleman I have forgotten. The condition of the bones was so coarse that probably the word crushed would best define it. The potash salts used were of the cheapest variety, known by the name of Kanite

which contained but a minimum of potash to a maximum of chloride of sodium, or common salt; a subsequent analysis proving that the composition as given was incorrect, the proportion of potash present being not nearly so great as the original analysis set forth. Thanks to our agricultural college with its agricultural professors, this deception was duly detected and duly exposed, so that the public is not so likely again to pay for a good article and get a poor one. In these three articles were the three substances which make up about all that vegetation needs, viz:—nitrogen, phosphate of lime and potash. The hen manure and bone were each rich in nitrogen and phosphates, while the kanite gave the potash. The hen manure was especially rich in nitrogen and the bone in phosphates. To manure the three acres I used twenty-five barrels of hen manure, twelve barrels of bone and three of kanite. These were composted with about an equal quantity of fine loam—a square heap being made by spreading layer on layer of each to a height of about three feet. The mass was allowed to remain for three days, until well heated by fermentation, when it was pitched over and very thoroughly mixed together and allowed to stand about twenty-four hours longer when heat having again been developed it was again pitched over, and the process was a third time repeated. The entire mass had now become very thoroughly mixed together and was mechanically in very fine condition. The ground having been thoroughly prepared, about a quart of this compost was applied to each hill, covered with soil, and the seed planted upon it. The result showed that the kanite was too strong of common salt, for but few of the seed vegetated. The trouble could not have arisen from the hen manure being too concentrated, for I have often used it as strong and even stronger and yet had no difficulty in getting healthy plants. The result was, we were compelled to transplant into many vacant hills. The crop received the usual cultivation, and, though a part of the growing season

was very dry and this crop on a high, steep hill, yet ultimately I had one of the finest crops of Essex, Wakefield, Winegstadt, Wyman and Schweinfurt Quintal cabbages it was ever my good fortune to raise, indeed of the Schweinfurt I think in the many years I have raised them I never had so fine a crop.

The cost of the manure was as follows :—

| | | |
|---|---|---|
| 25 Barrels Hen Manure at $1.00 per bbl. | $25.00 | |
| 12 Barrels Bone, 180 lbs each at $22.50 per ton, | 24.30 | |
| Kanite, about - - - - | 12.00 | |
| Expense of Composting, - - - | 5.00 | |
| Cost of teaming Manure, - - - | 5.00 | $71.30 |

It will be seen that the cost of the manure on the ground and mixed, was about twenty-four dollars for each acre of cabbage. As any farmer of experience knows, as a rule, to insure a first rate crop of each of these varieties of cabbage, at least six cords of good stable manure to the acre would be required; and as every farmer of experience also knows, such manure landed in the field costs on the average ten dollars to the cord, which would make the cost for each acre of cabbages $60.00, on the side of barn manure, and for the three acres $180.00, against $71.30 on the side of the mixture.

But the common farmer may say that the six cords will leave residue in the ground which the grass crop will find when the land is laid down. True, but so will the mixture leave considerable of phosphate of lime, potash and salt behind it. But raising cabbages on such a scale belongs to market farming rather than to common farming, and those who follow it only at long intervals lay land down (grass is the poorest return they get) and meanwhile for many years every acre receives just about as much manure one year as another but little or no account being taken of what might be left in the soil by the preceeding crop.

JAMES J. H. GREGORY.

## GRAIN CROPS.

The chairman of your committee on Grain Crops submits the following report: —

The 19th of July I received a notice from the Secretary of the entry of a crop of rye for premium by Mr. Jos. Whitehead of Saugus. The Committee were notified to visit Mr. Whitehead the 23d, but none appeared except the chairman, who found a very good piece of rye which Mr. Whitehead delayed cutting somewhat to his disadvantage that the committee might see it standing, but as nothing has been heard from in since there can be no report made of it, or award given.

October 29th, the chairman received a letter from Mr. Oliver P. Killam of West Boxford saying that the first of the month he had made application to the Secretary for premium on a crop of corn, and requesting immediate attention. The chairman knowing the full committee could not be notified in time to meet till the last of the following week took the responsibility of viewing the field alone. He found Mr. K. had a field of four acres of very fine corn, about two and one-half acres of which was already harvested, an acre of the remainder in the stock he proposed for premium, a statement of which, is herewith annexed as is also a statement of the whole field, which was requested, as your chairman regards the whole crop a remarkable one for this County. The corn was thoroughly ripened, and very handsome, being long, eight rowed ears, with small cob and large kernel, and while the cost of culture given may be a little small, as the labor was probably premium labor, being performed chiefly by Mr. Killam, the statement of the amount of the crop is proportionally small, for while he allows eighty lbs. of ears for a bushel of corn, probably most purchasers would be satisfied with seventy-two lbs. giving one hundred bushels of shelled corn to one acre, and an average of ninety bushels to the four acres. Mr. K.'s field is

favorably located being protected by hills from cold winds, and sloping towards the southeast, and a portion of it where the heaviest corn grew has been much improved by underdraining. Mr. Killam is evidently an expert in the cultivation of corn and would probably succeed where many would fail.

The undersigned regards him entitled to the Society's premium of $10.00, for crop of corn.

WM. B. CARLTON, for the Committee.

STATEMENT OF OLIVER P. KILLAM.

The crop of 1873 was English grass, that of 1874 Indian corn. Twenty-one cords of long manure from the barn cellar was used on 4 1-2 acres, as nearly equal as could be. The soil is a dark, gravelly loam. The ground was ploughed once eight inches deep and afterwards harrowed and furrowed 3 1-2 feet apart each way. The cost of harrowing and furrowing was $2.50 per acre, cost of ploughing $3.50 per acre. Fifteen loads of manure were used on each acre, three loads being equal to one cord. The value of the manure on the ground was $9.00 per cord. Three hundred pounds of Cumberland Superphosphate was used at a cost of $7.50 per acre. planted from 15th to 20th of May, 3 1-2 feet apart each way, using about six quarts of eight rowed corn to the acre. Cost of seed and planting, $5.00 per acre. The crop was cultivated three times each way and hoed well once, and after harrowing the weeds were thoroughly cleaned out. The cost of cultivating, hoeing and thinning was $5.00 per acre. The corn was cut close to the ground the last week of September, four hills laid together and six bunches put in each stook, using a stooking horse and birch withes drawn around each one to hold it together. The corn was drawn to the barn from the 15th of October to the 8th of November and husked, the fodder bound in bundles and set butts up to cure. The cost

of harvesting, husking and storing was $12.50 per acre. There were on four acres, 626 1-4 bushels of sound corn, averaging 40 pounds to the bushel. The amount on one acre, 176 1-4 bushels of sound ears, 40 pounds to the bushel; also eight bushels of green corn, half of which would be fair corn when dry. After carefully weighing a portion of the fodder, my estimate of the amount is not far from six tons per acre at the time of husking, when thoroughly dry it would weigh much less. I consider the fodder twenty-four tons and worth $8.00 per ton. I sold at home about eight bushels of the corn after it was husked $1.40 per bushel, 75 pounds to the bushel. About thirty bushels of green corn in all, worth about half-price. Twelve hundred of Cumberland superphosphate was used on the four acres which cost $30.00.

ESSEX SS. Nov. 10, 1875. Personally appeared Oliver P. Kiliam, above named, and made oath that the above statement by him subscribed is true.

Before me, JOHN F. KIMBALL, Justice of the Peace.

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## ROOT CROPS.

There were nine entries this season, three of Onions, by Messrs. Merrill of Danvers, Burnham of Essex, and Gregory of Marblehead.

Two of Ruta Bagas, by Messrs. Merrill of Danvers, and Manning of Topsfield One of Cabbages, and one of Carrots, by Mr. Merrill of Danvers.

One of Squashes, and one of Beets, by Mr. Gregory of Marblehead.

We much regret that one entry came to hand too late for your Committee to give the same attention, We would recommend those intending making entries in future to be more prompt.

After carefully examining the several crops and statements submitted to us, we make the following awards :—

For the best conducted experiment in raising a crop of Carrots, premium of $10 00 to Samuel A. Merrill, Danvers. For the best conducted experiment in Danvers Onions, premium of $10.00 to Ira F. Burnham, Essex. For best conducted experiment in Turban squashes, premium of $10.00 to James J. H. Gregory, Marblehead. For the best conducted experiment in Brunswick Cabbages, premium of $10.00 to Samuel A. Merrill, Danvers. For the best conducted experiment in Ruta Bagas, premium of $10.00 to James Manning of Topsfield. For the best conducted experiment in early Red Globe Onions, premium of $10.00, to James J. H. Gregory of Marblehead. For the best conducted experiment in four varieties of table Beets, premium $10.00 to James J. H. Gregory of Marblehead. The committee would recommend a gratuity of $8.00 be awarded to Samuel A. Merrill for his excellent crop of Ruta Bagas. And a gratuity of $10.00 for his superior crop of Onions.*

In taking into account the number of bushels of Onions grown by Messers. Merrill of Danvers, and Burnham of Essex, upon half acre, after examining the statements of each, we would be led to think Mr. Merrill entitled to the premium. Although the crops of both parties were very excellent, we cannot but give Mr. Burnham's Onions the preference being more uniform in size, and perfect in quality ; we seldom see a crop better matured, or that would show more perfect onions, or better ripened for winter use.

Mr. Burnham appears by his statements very fortunate in ef-

* Note.—The Trustees voted not to adopt the recommendation of gratuities made by the committee.

fecting a sale of his entire crop at seventy-five cents per bushel. It appears Mr. Merrill has placed the value of his crop grown on half an acre at a much lower figure, sixty cents per bushel. And as the cost or whole expense in raising the two crops varies but two dollars, it leaves for Mr. Burnham nearly forty dollars more income than Mr. Merrill will receive providing he effects a sale at the price the statement presents.

Mr. Merrill applied to his half acre four cords manure, composed of night-soil, meadow muck, and barn yard manure valued at $40.00. Mr. Burnham applied to his half acre four cords common barn manure at time of sowing. In June, after the crop had started, applied two barrels of Brighton Blood Fertilizer at a cost of $10. Value of barn manure, $28, making a difference of only $2 in value of manure used by both parties.

The Committee have taken the liberty to award to Mr. Gregory a premium for his excellent crop of onions of quite a different variety, and would suggest that in the future the Society offer a premium on several different varieties as we do on different breeds of cattle, We think a premium ought not to be witheld from any one who will undertake the laborious task of growing a root crop, and furnishing to the Society a written statement of his mode and manner of growing the same, providing his crop merits it. And as the statements are generally published in the Transactions, we think the same cannot be otherwise than valuable to many for future use.

The Ruta Baga crops entered by Messers Merrill of Danvers and Manning of Topsfield, differed but little in quality, although some in quanity, Mr. Manning's were of the London Swede variety, very uniform in size, solid and having little top, growing mostly underground. The mode of cultivation by the two parties differ not a little, Mr. Manning harvested from his ground a crop of English hay about the 22nd. of June or previous to plowing for his crop, but his statement does not mention that

fact. The value of manure used and cost of cultivation comes far under the cost of Mr. Merrill's; we must differ with Mr. Manning; should not want to contract to prepare land, furnish seed, and cultivate one half acre for the small sum of eight dollars and seventy-five cents. In his statement which he presents to us he has failed to charge any thing for harvesting his crop, and when that amount is added most of the difference between the two crops would be in the manure applied. Mr. Merrill applied equal parts ashes, meadow muck, and horse manure, three cords valued at $25.00. Mr, Manning applied three cords barn yard manure and muck valued at $12·00 Mr. Merrill's crop of 350 bushels at the value placed on them at 42 cents per bushel amounts to $147.000. Cost growing crop as by statement $51.00, leaving a profit of $96.00. Mr. Manning's crop of 300 bushels value placed at 45 cents per bushel amounts to $135.00. Cost of growing crop by statement, $20.75 leaving a profit of $114.25. Possibly Mr. Manning intended to offset crop of hay against labor not allowed.

The crops of Samuel A. Merrill of Danvers, consisting of Onions, Cabbages, Ruta Bagas and Carrots, were visited by the Committee on Sept. 1st. Mr. Merrill as a vegetable grower, and for his prominent activity, energetic and skillful manner in which his two farms are conducted, deserves much praise. Mr. M. is particularly fortunate in leasing the well-known "Burley Farm" containing three hundred and fifty acres, for the purpose of bringing into execution and perfecting his many original ideas of market gardening; although the farm is mostly under the supervision of his sons, who gave us valuable information in relation to the farm and crops. The land upon most parts of the farm appeared in good condition and very productive. Secluded as it is by trees and growing wood upon all sides protecting the land and crops from the cold blast and blighting winds, so often injurious to growing plants, and fruit trees, now and then

studded with stately Oaks, large, and to all appearances very ancient, one of which measures around its trunk at the base twenty-one feet, some of its branches extending thirty-five feet. The land upon which the crops of Mr. Merrill grew (except his Onions) was a worn out pasture three years since, with a light gravelly soil well adapted to the growing of most kinds of roots.

The crop of Carrots grown on half acre, long orange variety, common barn yard manure was used at the rate of six cords per acre with a yield of twenty-four tons per acre, and a crop of Brunswick Cabbages on half acre with three cords common barn yard manure produced twenty-five hundred merchantable heads. Mr. Merrill in making up his statement of cost on several crops would appear to some to use exceedingly small figures, but owing to the character of the soil, and taking advantage of horse power, we are quite aware the labor has been done at the low figures the accompanying statements present.

The crop of Onions entered by Mr. Merrill growing in a distant field containing five acres, was an excellent crop of seven hundred bushels to the acre, and no doubt the yield would have been exceeded had not the maggot destroyed many of the young plants in the early part of the season. It was grown on land in good condition, and quite well adapted to such a crop.

The Committee were invited to visit the farm, or farms, of James J. H. Gregory at Marblehead, October 18th. The crops presented for our particular inspection, consisted of Turban Squashes, Red Globe Onions, and Beets four varieties, Early Blood Turnip, Simon's Early, Early Dewing, and Egyptian. The crops of Mr. Gregory, and the manner in which they are grown will pay any one interested in agricultural pursuits a long journey to see; we much regretted that time would not permit of our giving them more than a bird's eye view in the few short hours allotted us; one would need as many days. We considered ourselves exceedingly fortunate in having Mr. Gregory's val-

uable information and intelligent opinion in relation to his numerous and valuable crops. Mr. Gregory at the present time is working no less than six farms, all of which are used for growing vegetables and seed. One could ask for no better school where to store our mind with a thorough knowledge of agriculture than to have the privilege of the valuable instruction he would gain upon those farms, in watching the various experiments cont nually going on. As Mr. Gregory's crops are all, or nearly all grown for seed, they are allowed to remain in the ground until well matured or fully developed.

We were much pleased with his crop of Turban Squashes of about eleven tons per acre, which were stored at his squash house, were very superior, with little or no mixture, uniform in size, and apparently excellent in quality. His enormous crop of eighty tons, composed of several different varieties, was certainly a delightful sight to look upon. The Butman Squash, a new variety, grown quite extensively this season by Mr Gregory, who informed us is the only variety known to have originated in the United States. His very excellent crop of Beets, entered for premium, we found growing in the field were uniform in size, grown at equal distances with good space for them to develop, and showing good and careful cultivation. His Onion crop of several thousand bushels of different varieties, a part of which were grown on a reclaimed bog or muck meadow, were worth going many miles to see. The meadow upon which a part of the Onions grew producing a crop at the rate of seven hundred and ten bushels to the acre, was a few years since a useless bog hole, nearly covered with scum and stagnant water; a main ditch was opened, after which drain tile was laid, Mr. G. informing us he had laid over four miles in one field.

There appears to be a great advantage in tilling land of like quality in having no wet in spring, or weeds in autum. The Cabbage crop mostly growing upon his farms in Middleton, we

did not have time to visit, at that time it was not fully matured, consequently he declined entering the same for premium. We are informed that since then they have rapidly developed or enough so had there been time, to warrant a premium. His Cabbage crop embraces ten or twelve acres, which he intends to cover for spring setting. All the imperfect cabbages, squashes and other vegetables that cattle will eat are fed daily to his herd of noble grade Ayrshire Cows which do not belie their keeping.

Mr. Gregory is very fortunate in occupying land situated on the borders of the ocean which enables him to collect a large amount of sea manure valuable as a fertilizer, when composted with glue waste, night soil and barn manure. Unlike most vegetable farms, when all crops grown are marketed for consumption, he has double work to perform, not only in resetting n spring, of his great variety of vegetables, but the harvesting of the seed and preparing for market; employing in the growing season, forty men, and in the winter season, nearly as many young women in his spacious seed establishment.

After completing our inspection of the numerous crops, the mode and manner of cultivation, before taking leave, by the politeness of Mr. Gregory we were invited to visit his beautiful and spacious mansion, nearly completed, situated upon a delightful elevation on the sea shore, combining architectural beauty, convenience and comfort. We are quite sure the English meaning is truly applied to that richest of words, "Home."

We have no doubt that the principal object in offering a Society premium for the best conducted experiment in growing root crops is to stimulate and encourage the farmers of the County to renewed endeavors in the raising of so valuable and indispensible a crop, both as an article of diet and also for our cattle. The number of vegetables that come under the head of root crops in these modern times are numerous indeed, and require careful thought, study, and much experimenting in order to ascer-

tain those varieties that are not only most desirable for ourselves and our cattle, but those that will return to us the greatest amount of profit annually.

We were somewhat surprised that no entries were made of that very valuable and almost indispensible vegetable, the potato; not only as an article of diet, but one of the most remunerative crops that can be grown in the County. The potato plant is a native of Peru and has been known in Europe about two hundred and fifty years. Like most other important discoveries it made but little progress for many years. The potato will thrive in every soil, and seldom suffers from an inclemency of seasons. It is calculated that a far greater quantity of farinacious food can be raised on an acre of ground planted with potatoes, than many kinds of grain. They are not considered so hearty a food as corn, but no man will perish with hunger who can have plenty of potatoes. The analysis by some shows that potatoes and water alone will nourish man completely. And whenever a good crop of potatoes are grown we need have no fear of famine. Since the introduction into this country of the nearly wild plant much improvement has been made both in quanity as well as quality.

Not many years since a crop of six bushels was raised upon one of our large farms in Essex County; it was looked upon with wonder and astonishment, the same farm at this late day would produce as many hundred. Scarcely any cultivated crop can be grown with less hand labor than the potato, now that we have both the planters and the diggers operating by horse power, the planter will not only slice and drop uniformly, but will apply any kind of fine dry fertilizing material, and at the same time furrow and cover the potatoes; with the Chandler hoe, and a suitable kind of soil, properly prepared, in a favorable season the potato can be grown at a profit for less than fifty cents per bushel delivered at the farm. It may be worthy of remark that

no nation can be very populous, which does not draw a great portion of its food from underground.

Although the potato crop the present season will not be as remunerative. as in former years, it should not discourage the planting of them in future. According to the statistics in 1873, the entire potato crop of that year in the United States was 106,037,000 bushels.

Perhaps next in importance comes the turnip, both as a crop for market, and food for ourselves and our cattle. No farmer owning cattle can afford to dispense with their use, of all the varieties grown the Ruta Baga is considered the most profitable, the yield oftentimes reaching as high as thirty-five tons per acre ; in Essex County an average yield is about twenty tons. In England and Scotland in the great sheep growing districts no farmer would attempt to raise a flock of sheep without the cultivation of turnips.

The turnip will grow on all the varieties of soil, some varieties succeed best on sandy soil, but the Ruta Baga best on a soil more heavy, Of the many varieties, after some experience, we would give the London Swede the preference. After some experience in the growing and feeding of the Swedish turnip, I would give them the preference for feeding to Sheep, Colts and Horses. The horse will do much better fed with them and come out looking better in spring than when fed with Carrots.

Turnips, Cabbages, Potatoes and many other kinds of vegetables were unknown to man until within the sixteenth century, while the Onion was a great favorite in Egypt four thousand years ago. The number of different varieties of root crops is so numerous one hardly knows which to recommend for culture as a profitable crop. It is natural for most farmers to grow those varieties that will return to them the greatest amount of profit in dollars and cents, regardless of the use made of them. In the Connecticut valley many farmers who a few years since

were growing vegetables have now turned their attention to cultivation of tobacco, from the fact that it returns to them a greater amount of money, according to the amount of time and labor expended. Perhaps it should be the aim of every farmer to ascertain the chemical nature of the materials required by various plants and the best methods of obtaining these materials with reference to stimulating plant life. According to the several statements which have been submitted to the Committee with cost of growing crops and income received, we judge the raising of roots to be a profitable business. The much lamented A. J. Downing has well said "To be happy in any business or occupation (and country life on a farm is a matter of business) we must have some kind of success in it, and there is no success without profit and no profit with without practical knowledge of farming."

*Committee*—Alonzo B. Fellows, Bennett Griffin, Joseph S. Howe, James P. King, Aaron Lowe.

## ONIONS.

STATEMENT OF J. J. H. GREGORY.

The lot of onions offered for premium are of the early Red Globe variety, and were grown on a piece of reclaimed meadow land. This land after having been suitably drained, was covered with sand and gravelly loam at the rate of about a hundred two horse loads per acre. The land on which the onions grew, had onions also the year previous and the year before that, we cultivated it to cabbages and potatoes. The manure used this season was mostly a compost of well rotted glue manure and muck, which had absorbed the drainings from a manure pile of the same material located on a slope above. It was applied at a rate of about nine cords to the acre. The land was brushed and planted in rows fourteen inches apart at the rate of four pounds

of seed to the acre, great care being taken to get the seed at a uniform depth. Throughout the season the ground was kept clear of weeds, receiving in short first rate care. The crop ripened down very early. The piece selected contained exactly half an acre and the crop weighed 18,484 pounds, which at the legal weight of 52 pounds to the bushel would make 355 bushels. The following statement shows the cost of the crop:—

| | | |
|---|---|---|
| Manure and spreading on half an acre, | $ 45.00 | |
| Ploughing half an acre, | 2.50 | |
| Harrowing, Raking and Planting, | 6.00 | |
| Seed, | 10.00 | |
| Three Slidings, | 4.00 | |
| Three Weedings, | 12.00 | |
| Pulling and Turning, | 5.50 | |
| Harvesting, | 8.00 | |
| Topping, | 9.50 | |
| Use of Land, | 6.00 | $108.50 |

Onions raised on reclaimed meadow cost less per acre than on upland, the difference being felt mostly in the preparing of the ground and the weeding. As I use a large prorortion of each of the crops entered by me, viz—onions, squashes and beets, as seed stock, I make no estimate of market value.

STATEMENT OF IRA F. BURNHAM.

The land on which my onions grew, as measured by your Committee, contains one-half acre, In the spring of 1874 it was dressed with three cords of barn manure and planted with a variety of vegetables for family use. Last spring I plowed in four cords of barn yard manure harrowed it till fine and sowed on the 26th of April 2 lbs. of Danvers Onion seed, in rows 14 inches apart. Seed came up very even. In June I sowed on 2 bbls. of the Brighton Blood Fertilizer which had a very marked effect the young plants growing very rapidly. The following is

the cost of the crop :—

| | | |
|---|---|---|
| Ploughing and preparing land, - - | $ 4.00 | |
| Seed, - - - - - | 10.00 | |
| Manure 4 cords, - - - - | 28.00 | |
| Weeding 3 times, - - - - | 24.00 | |
| Two bbls. Brighton Fertilizer, - - | 10.00 | |
| Harvesting, - - - - | 10.00 | $ 86.00 |

By 330 bushels of nice well ripened onions at 75 cents per bushel. $ 247.50.

## TURNIPS.

STATEMENT OF JAMES MANNING.

To the Committee on Root Crops,

Gentlemen :—The following statement shows the cost of cultivating one half acre of ground for Ruta Baga Turnips :—

| | | |
|---|---|---|
| Ploughing and Harrowing, - - | $ 5.00 | |
| Three cords Manure and Muck, - - | 12.00 | |
| Planting and Cultivating, - - - | 3.00 | |
| Seed, - - - - - | .75 | $ 20.75 |

The above named ground has been used for English grass crops for the last eight years. There were three hundred bushels of Ruta Bagas raised on this half acre, which are worth forty-five cents per bushel. Weight sixty pounds per bushel, or nine tons in all. The ground was ploughed eight inches deep, and planted on the twenty-fourth of last June.

## SQUASHES.

STATEMENT OF J. J. H. GREGORY.

My crop of Turbans were raised on our good strong Marblehead soil, which seems to have a particular affinity for squashes both in the quantity of the yield and the quality of the crop. The ground was thoroughly ploughed and the manure applied at

the surface and worked in by the Neiswitz harrow. This manure was a compost of muck, night soil and barn manure, the application being at the rate of nine or ten cords to the acre. Seed was planted in spaces of 9 by 10 feet into which a handful of superphosphate and rotten bone dust had been previously stirred and ultimately two plants were left standing in each space. I purposely ommitted the use of the term hill, because in common practice this means a spot excavated, filled with manure and then covered with soil, whereas for many years past in my annual planting of an average of eight or more acres, I have not excavated a hill, my practice being to drop on the surface where the seed are to be planted whatever manure is to go there and turn this under with a fork, keeping it as near the surface as possible and being particularly careful to stir it well into the soil should it be a concentrated fertilizer. The seed was planted about the twenty-fifth of May. The crop was well tended, being kept very clear of weeds and the ground kept light and fine by frequent cultivating, special care being taken to cultivate very thoroughly just before the runners began to cover the ground, that at the time the roots were very freely pushing for food they might as far as practicable have every obstacle removed in the way of finding it.

The area on which this crop was grown contained 24,660 feet. The weight of the squashes, as per memoranda enclosed, was 11,695 pounds, which is at the rate of about ten and one quarter tons to the acre.

| | Load No. 1. | Load No. 2. | Load No. 3. | Load No. 4. |
|---|---|---|---|---|
| | 4085 | 4390 | 4430 | 4490 |
| Tare, | 1425 | 1425 | 1425 | 1425 |
| Total, | 2660 | 2965 | 3005 | 3065 |

The following shows the cost of the crop :—

| | |
|---|---|
| Manure and Spreading, - - | $ 35.00 |
| Ploughing and Harrowing, - - | 3.50 |

| | | |
|---|---|---|
| Seed and Planting, | 4.00 | |
| Cultivating three times, | 4.50 | |
| Hoeing twice, | 3.00 | |
| Harvesting, | 8.00 | |
| Use of Land, | 6.00 | $ 64.00 |

## BEETS.

STATEMENT OF J. J. H. GREGORY.

The soil on which these beets grew is a strong loam, this was manured with an admixture of sea, barn and glue manure at the rate of five cords to the acre. This was thoroughly mixed with the soil and after harrowing and raking, the seed was planted at intervals between the 18th of June and the 3d of July, in rows sixteen inches apart. In the plot were four varieties of the turnip beet, viz—Early Blood, Simon's Early, Dewing and Egyptian. The beets were thinned to six inches apart in the rows, given clean cultivation, and were pulled and topped from October 15th to October 25th when of an average diameter of about three and one-half inches, a good size for table use. The area of the plot was 22.346 feet, and the number of pounds of the yield was 19,754, a little short of ten tons, which at sixty pounds to the bushel would make 329 bushels, As will be seen the crop is not presented as a crop for fodder purposes, for in that case they would have been planted as early as frost left the ground, and have been thinned to a distance of eight or ten inches apart in the rows. By planting them very early on a rich soil, I have grown the early blood turnip beet to weigh from ten to twenty pounds and reach the size of a half bushel measure. This crop is presented as an excellent yield for beets of a size suitable for table use. The following shows the cost:—

| | |
|---|---|
| Manure and spreading, | $ 25.00 |
| Ploughing, Harrowing and Raking, | 8.50 |

| | | |
|---|---|---|
| Seed and Planting. - - - | 3.00 | |
| Three Slidings, - - - - | 4.00 | |
| Three Weedings, - - - - | 14.00 | |
| Pulling and Topping, - - - | 10.00 | |
| Harvesting, - - - - | 2.50 | |
| Use of Land, - - - - | 3.00 | $ 70.00 |

## CABBAGES.

STATEMENT OF S. A. MERRILL.

I enter for premium one lot of Brunswick Cabbages, containing one half acre. The land had been planted with potatoes for two years, and before ploughing, three years ago was a piece of old, worn out pasture. The soil is a gravelly loam with hard pan. Have generally dressed with green barn manure about six cords to the acre with three hundred pounds of Peruvian guano, put in the drills after broadcasting the green manure and cultivting it in with the Neswitz harrow. I prepared this half acre about the first of May with three cords of green barn manure, cultivated in, and then sowed the cabbage seed in drills three feet apart. Sowed the seed with Holbrook's seed sower. I hoed and thinned in June, leaving the plants about 2 1-2 feet apart in the drills. I raised twenty-five hundred heads of cabbage on this half acre which were worth, in the market about six cents per head. The expense of the crop is as follows :—

| | | |
|---|---|---|
| Ploughing, - - - | $ 1.50 | |
| Harrowing and cultivating, - - | 1.50 | |
| Value of manure, - - - | 18.00 | |
| Broadcasting and cultivating, - - | 8.00 | |
| Seed, - - - - - | .50 | |
| Land rent, - - - - | 5.00 | |
| Marketing, - - - - | 25.00 | $59.50 |

Value of crop $150.00. Land measured by Patrick Murphy.

## CARROTS.

STATEMENT OF S, A. MERRILL.

I enter for premium one half acre of Carrots. The land on which they were grown was an old, worn out pasture three years ago. It was ploughed and planted one year ago with potatoes, with green barn manure spread broadcast and cultivated in drills using 300 lbs of guano to the acre. Last year it was planted with Carrots, using about six cords of waste manure to the acre. This year I ploughed and planted about the middle of June, using six cords of manure to the acre. I think this time the best for planting carrots for two reasons. In the first place we save one weeding; secondly, I consider carrots keep much better in the winter that are not too ripe, and they grow better in the autumn than they do in the hot weather. I raised from this half acre, twelve tons of good, marketable carrots of the long orange variety, worth more for marketing in the spring than the medium or short horn carrot. at least this has been my experience for several years. The cost of this crop is as follows.

| | | |
|---|---|---|
| Plowing, | $1.50 | |
| Harrowing and cultivating, | 1.50 | |
| Value of manure, | 25.00 | |
| Applying manure, | 5.00 | |
| Seed. | .50 | |
| Hoeing and weeding, | 8.00 | |
| Harvesting, | 7.00 | |
| Land rent, | 10.00 | $58.50 |

Value of crop, 12 tons, $120.00. Land measured by Patrick Murphy.

# ESSAY.

BY FRANCIS H. APPLETON.

## REFORM.

Where is it needed and how shall it be brought about? I think that I can safely say that there only a comparitively small number of the members of our Essex Agricultural Society that do not need to reform in their actions as members.

According to the By-laws a committee is appointed at the annual meeting, by nomination from the floor, consisting of one member from each city or town, whose duty it is to meet before the first of the following July and nominate a list of officers and Trustees to be voted for at the next annual meeting. Each member of the Society should therefore take the greatest care to have a public spirited man of unquestionable character represent their home on this Committee.

With a Committee thus carefully appointed, none but the best officers could be nominated and it would be better for us to thus always vote the Society's regular ticket,

It must be remembered that the Trustees have power to do what they please with the funds of the Society; so it will be at once seen that should an incompetent or selfishly disposed board of Trustees at any time be elected, they could immediately squander the Society's funds in whatever way they chose. Thus the present excellent financial condition of the Society, which is the result of years of care, might be destroyed in an hour.

It is fashionable at the present time to cry reform. While reform is unquestionably much needed in the Country at large, it might also be advantageously applied to some customs of our Society; but it is of the utmost importance to be sure that the people who cry for reform are honest in their intentions and that they are not at the same time aiming to gain some selfish

purpose for themselves or their friends at the expense of the public. There exists too many persons of this kind, just at present, and the eyes of unsuspecting people should be opened to them. Our County has not long since overthrown a notable example of this in political life.

It is not well to always trust to the opinions of the loudest and most fluent talkers. It is much better to study and form one's own opinions from what we can read and hear.

Do not let personal animosities or predjudices influence you, for often a personal enemy may be one who could best serve you in an official capacity.

Many members take no pains to attend the annual election and so with-hold their council in appointing the nominating Committee. Every member should make such arrangements as will enable him to attend the Annual meeting and then we should have all parts of the County well represented. which, while it would add greatly to the usefulness of the meeting, would add much to the pleasure of the day.

The most needed improvement at our Shows seems to be covered pens for the unfortunate animals that now favor the Shows with their presence and have been exposed to the severe storms that have at times taken place. Farmers cannot readily find outside shelter in case of rain or cold, and more often would not care to be put to that expense, consequently many valuable animals are not exhibited which would afford excellent instruction to our farmers. Ayrshires, Shorthorns, Jerseys, etc. will only be exhibited in small numbers until their owners shall be assured that proper protection from the weather will be provided.

I am convinced that the Society ought not to locate. To locate would be simply suicidal. I would urge all members who have its best interests at heart to strongly oppose all attempts to locate.

It is impossible for the Society to own portable covered pens or the lumber necessary to make them, on account of the expense of transporting them.

The New York State Society has, until the last four or five years, held its Shows at different places each year and has had pens built by contract of rough boards which were sold after the show. The boards were but little cut or injured and the Society sustained only a small loss on them. The labor and nails were the chief expense. I do not however think it would be advisable for our Society to adopt this plan.

The New York Society having attained an excellent financial condition, knowing that their Annual Show brought many benefits to the city or town where it was held, and desiring better covered pens, and buildings of their own planning, decided to visit certain places regularly every few years where the inhabitants should erect suitable buildings.

These buildings have already been erected in several places, so situated, that they are easily accessible from the country around them, and that by visiting them in turn the good influence of the Society is scattered all over the state.

I believe that some such plan might be tried to advantage in this county and I would respectfully suggest that it be carefully considered at on early meeting of the Trustees, in order that their views may be again declared for the benefit of the members. I think that three places could be selected for holding the Annual Shows each of which would be central to a third of the County and at the same time easily reached from any part of it.

Would it be an advisable plan for the Society to propose to the City and Town authorities of Lawrence, Newburyport and Danvers to visit in rotation said places, provided the citizens would agree to furnish covered pens for all live-stock exhibited, in addition to such arrangements as are now made. Both Law-

rence and Danvers have their their parks where the Society would find excellent accommodation, with the addition of covered pens, and I doubt not that Newburyport could provide equally good accommodation should they be willing to attempt it.

Another matter of great importance was brought prominently to my notice this year when serving on the Committee on Bulls. All County Societies, recieving the State bounty of $600, are compelled to award premiums only to thoroughbred bulls. I found that few of the owners of cattle know rightly what a thoroughbred animal is. Several grade bulls were entered this year as thoroughbreds, their owners confidentialy believing them to be such. I know of cases where our Committee in the past, have awarded prizes to grade animals in the thoroughbred classes. Such cases should not occur and our Committee should be instructed, in accordance with printed authority from the State Board of Agriculture, exactly how it shall be ascertained whether an animal is thoroughbred.

When all the ancesters of an animal can be proved to have been imported from Ayrshire, or to be descended from animals imported Ayrshire, said animal is a thoroughbred Ayrshire. When in this case an ancestor cannot be proved to be a thoroughbred said animal is a grade. The same rule applies to all important breeds of cattle.

Imported stock has been of the greatest value to this Country the Massachusetts State Board of Agriculture, as I have said, encourage the use of thoroughbred bulls only and it is best that only such should be used, that their ancestry may be readily traceable and that the quality of their descendants be assured.

The only thoroughbred stock that we have in this Country is all imported from abroad. The imported breeds should be kept pure; but must we always be advised by the highest Agricultural authority in the State to use none but thoroughbred bulls from imported stock?

Can they not recommend some carefully matured plan by which we can gradually arrive at a breed of cattle, which shall combine, for example, the richer milk of the Jersey and the greater quantity of the Ayrshire and at the same time be purely Massachusetts, or New England, in its origin.

Why then should we not some day in the future be able to export to England a breed that shall prove invaluable there and be an improvement on their home breeds, thus doing better by them in return for having done well by us.

It would take time to accomplish this, and as all such results must have a beginning, the longer that begining is postponed so much farther off is the time when success would crown our efforts.

The importance of that noble and companionable animal, the horse, should be kept prominently before the managers of our Society and every possible opportunity should be afforded for showing his abilities to the best advantage. He should not be allowed to be degraded or cruelly treated, so far as this Society has influence to prevent it.

Horse racing should never be allowed at the Shows of this Society, and the Society should never meddle in any way with it. When properly conducted, horse racing is a sport entirely separate and distinct from Agricultural Shows and in no sense a branch of Agriculture. If any member of this Society interest themselves in horse racing let them get all the profit and pleasure they can from it at the proper time and place. Let them select those horses that are sufficiently sound to compete for our prizes, and we shall be only to glad to have them entered for competition at our Shows.

Our enterprising farmers, with others, should take such necessary action as will allow this county to be properly represented in the Agricultural Department of the coming Centennial Exhibition at Philadelphia. They must remember that

Essex County, although a small portion of the vast territory of this Republic, occupies a place of no small importance in the affairs of this Commonwealth, and should be made to hold its proper position before the eyes of the visitors from all parts of the world. Let the visitors from the more Eastern Nations, in viewing the show at Philadelphia, see in as many classes as possible that Essex County, with which they traded much in the days of their Fathers and Grandfathers, is a thriving place and able to be largely represented. Many articles that may seem trivial to us at home might be of great interest to foreigners from remote countries, and this fact should be clearly borne in mind. Large quantities of any one article should be avoided, like the huge monument of quack medicine bottles such as was exhibited at Vienna in 1873, but many articles of different kinds are wanted.

Before coming to a close, I want to say a word about Herd Books. Because an animal is entered in a Herd Book, is that animal necessarily a thoroughbred? No. The fact of being entered gives the purchaser of the animal a chance of ascertaining whether the pedigree proves the animal in question to be thoroughbred.

Some recognized authority like the State Board of Agriculture should declare what Herd Books they recommend as being good and reliable, and all such should be within the reach of all farmers. Every County Agricultural Society should own them and then, knowing what constitutes a thoroughbred animal, every one would always be able to ascertain the truth for themselves before buying, provided the animal had a Herd Book number. The value of an animal is increased by being entered in a reliable Book.

## TRIAL OF MOWERS AND HAYING IMPLEMENTS.

At a competitive trial of Haying Implements held at Danvers, June 22d, 1875, the Committee appointed by the Trustees of this Society to act as judges of Mowing Machines respectfully submit the following report :—

Every precaution was taken to have the award of the premiums as fair and unpredjudiced as possible; requiring the same tests of every machine and giving to each competitor an equal chance to show the qualities of his machine. The trial was conducted under the following rules :—

1. Each manufacturer, or his authorized agent, may enter one Two Horse and one One Horse Mower.

2. Each Machine shall mow one-fourth of an acre.

3. The draft of each machine shall be tested by the Dynanometer.

4. Each Machine must make one round at a slow walk, one round may be made at a quick pace, the rest of the lot shall be mowed at the ordinary gait of the horses, used without urging. Time will not be taken.

5. Each Machine shall be obstructed by dry rowen and a green willow stick, one inch in diameter or more.

6. Every Machine will be required to be stopped and started in the grass one or more times without backing up.

There were five manufacturing companies represented at the trial by one Two Horse and one One Hose Mower each. The Ames Plough Co., Boston, entered the Garfiield Two Horse Mower, cutting bar 4 feet 6 inches, draft, as indicated by the Dynanometer, 205 lbs., also one One Horse Machine, cutting bar 3 feet 6 inches Whittemore Bros., Boston, entered the Wood's Iron Gold Prize Two Horse Mower, cutting bar 4 feet 6 inches, draft 210 lbs., also Wood's Iron, Gold Prize One Horse Mower, cutting bar 3 feet 6 inches. The Buckeye Manufacturing Co.,

Fitchburg, by A. C. Barnard, one Buckeye Two Horse Mower, cutting bar 4 feet 6 inches, draft 190 lbs., also one Buckeye One Horse Mower, cutting bar 3 feet 6 inches. Henry Hale & Co., Salem, entered one Wm. Anson Wood New Eagle Mower, cutting bar 4 feet 3 inches, draft as usually run 125 lbs., and with the bar rollers off the ground, 175 lbs., also one One Horse Machine, cutting bar 3 feet 6 inches. Warrior Mower Co., Little Falls, N. Y., entered one Warrior Two Horse Machine, cutting bar 4 feet 3 inches, draft 175 lbs., also one Warrior One Horse Machine, cutting bar 3 feet 6 inches.

All of these machines performed their work in a very satisfactory manner, and stood the tests to which they were subjected, except the Garfield Mower which failed in some particulars. This machine seemed to the Committee to be too light to bear the somewhat rough usage which our New England farms require.

The Buckeye, and Wood's Iron Gold Prize Mowers are too well known to require any especial mention descriptive of either the acknowledged strength and durability of their construction, or the excellent quality of their work.

The Warrior Mower, apparently very simple in construction and having fewer parts, to the casual observer might seem to lack strength, but in fact, owing to a stump and a tree being in the lot which was assigned to be mowed by it, the operator volunteered some tests unusual of its strength, without injury, which surprised some members of the Committee at least.

The Wm. Anson Wood New Eagle Mower is a machine recently introduced, and possesses some advantages and improvements peculiar to itself. The castor wheel at the base of the cutter bar seemed to the Committee an improvement on any other machine. It was well constructed in all its parts, did excellent work and must take its rank as a first class machine. It was also remarkable for lightness of draft which was less than that of any other

machine.

The Committee are gratified to find the mowing machine so nearly perfected, and feel sure that no farmer can make a mistake in purchasing either of the last four mentioned machines.

They award the first premium of the Society's Diploma to the Buckeye Two Horse Mower; second premium, $25.00, to Wood's Iron, Gold Prize Two Horse Mower; third premium, $10, to the Warrior Two Horse Mower. First premium. Society's Diploma to Wood's Iron, Gold Prize One Horse Mower; second premium, $15, to the Buckeye One Horse Mower.

*Committee*—Benjamin P. Ware, Josiah Newhall, Joshua N. Kent, A. H. Gould, James P. King.

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## ESSAYS AND REPORTS OF COMMITTEES.

The Committee have made the following awards:—

To Francis W. Appleton of Peabody for best Essay, 1st premium, $15.00.

### REPORTS.

To J. D. W. French of No. Andover for report on Bulls 1st premium, $10.00. To T. C. Thurlow of West Newbury for report on Apples, 2nd premium $8.00 To J. J. H. Gregory of Marblehead for report on Manure, 3rd premium $6.00.

D. E. SAFFORD, for the Committee.

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## TREADWELL FARM.

The Committee on the Treadwell Farm respectfully report that the conditions of the lease of the farm to Mr. T. W. Pierce

have been more than complied with, inasmuch as he has applied to the farm, according to the statement of Mr. Philbrook, who has managed the farm, ninety-eight cords of good barn yard manure, and one hundred and eleven bushels of wood ashes from a lime kiln. The products of the farm the last season were
15 tons of English Hay,
20 tons of Meadow Hay,
2 acres of onions produced 150 barrells of 1st quality, besides a large quantity of a poor quality,
4 acres of potatoes yielded 600 bushels of very nice quality.
1 acre and 30 rods of carrots yielded 700 bushels.
1 acre of ruta baga yielded 275 bushels.
200 bushels flat turnips were grown among the onions where they were badly eaten by the cut worm and maggot. 220,000 pickle cucumbers, a quantity of beets, squashes and 25 barrels of apples were also grown upon the farm.

The result of the second year of the experiment began last year, (for particulars see report in last years transactions) is as follows :—

Lot No. 1 produced 400 lbs of hay,
" " 2 " 1200 " " " and 460 lbs of rowen.
" " 3 " 1300 " " " " 530 " " "
" " 4 " 382 " " "

By this statement it will be seen that the effect upon the second year's crop from 1000 lbs, of Russell Coe's superphosphate on one half acre of land produces 18 lbs. of hay; and of 1200 lbs. of Brighton Abattoir fertilizer on one half acre of land is 1278 lbs. of hay; and of four cords of barn yard manure on one half acre is 1448 lbs of hay.

The object of the committee in applying these quantities of fertilizers the first year was in the first place to manure one half acre with a good liberal dressing of barnyard manure, and the other two lots with the same value in money of commercial

fertilizers, with that of barn yard manure so that farmers could judge what advantage if any is to be derived from the use of such fertilizers over that of barn yard manure at the present prices of each.

BENJAMIN P. WARE, for the Committee.

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## JOHN W. PROCTOR.

At a meeting of the Trustees of the Essex Agricultural Society at Danvers, June 2d, Hon. George B. Loring introduced with the following remarks, resolutions on the death of Hon. John W. Proctor, which were unanimously adopted.

"Before proceeding to the business of this meeting I desire to call the attention of the Trustees of the Essex Agricultural Society to the departure of one of the oldest and for many years most influential members of their body, who since we met has left his work in this world. I refer as you have all undoubtedly anticipated, to the death of the Hon. John W. Proctor. Mr. Proctor was one of the founders of our Society. He was intimate with and a great admirer of Timothy Pickering; and when that remarkable man organized this association, it was Mr. Procter then comparatively young who joined most heartily in the enterprise. For many years he performed the services of Secretary, was long time President, and was during a large portion of his life one of our most useful and efficient members. He had a natural love of agriculture to which occupation he was born; and he never forgot their tastes, nor that experience which he acquired while yet a boy on his father's farm. His opinions on agricultural matters were well founded and decided, and he had

great influence in this Society at a time when the strong men of the County were interested in its welfare and took part in its deliberations. And his communications to the agricultural literature of his time were numerous and valuable.

Mr. Proctor commenced life as a lawyer and he devoted himself to his profession with assiduity and skill. The profession which he chose was by no means a popular one, and many a young man who set forth in life with him has left on record the trials and troubles through which he passed in his endeavors to establish a good reputation and a good standing. But he adhered resolutely to his work. Perhaps at times somewhat imperious, he earnestly and powerfully pursued his profession, and took his stand among the able lawyers of the County. He never hesitated to express his opinion freely and fearlessly; and in doing this he often sacrificed associations which it might have been advantageous to him to retain. But he always insisted on an honest expression of his views and was ready at all times to sustain his opinions by vigorous argument.

The death of Mr. Proctor not only removes his own form from among us, but leads us to realize that a generation of able and influential men, his associates and friends in early life, have now nearly all left us. Around his name gather those of Pickering, Saltonstall, Newell and King, men who did honor to their day and generation, and who left us an example worthy of all imitation. The departure of these men imposes upon us who remain an increased burden and responsibility; and I trust we who are associated together for the purpose of developing the great art which they loved so well and which we are pledged to protect and cherish as their successors and heirs of their duties and obligations as a mark of respect to Mr. Proctor I offer the following resolutions.

*Resolved.* That we learn with deep regret the death of one of the founders of the Society, long time President and Secretary,

the Hon. John W. Proctor; and that we recall his long career of usefulness with a feeling of pride, and remember with peculiar pleasure his association with the distinguished men who guided our counsels in the beginning.

*Resolved.* That the Secretary of the Society extend to the family and friends of the deceased this mark of the respect which we owe him as one of our most useful and well known associates.

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## FRANCIS DANE.

On the first day of the meeting of the Society, Allen W. Dodge, of Hamilton, made the following remarks on the death of Francis Dane :—

It seemed to him, said Mr. Dodge, most fitting and proper to pause a few moments and pay a passing tribute to the memory of his townsman so recently deceased, Francis Dane, one of the Trustees of this Society. To-day we sadly miss him from our annual gathering. He was always with us, so full of life and spirits, and taking such an active interest in our proceedings and in the different departments of our Exhibitions. He had a thorough love of the soil and of everything pertaining to it. Born and bred on a farm in Hamilton, but drawn from it to the city where he shortly achieved a fortune, his heart seemed bound up in his early home attachments. These and the need of recreation led to the ownership of the old homestead acres, which he largely added to from the adjoining lands, and improved and beautified with no stinted expenditure of money. To cultivate his broad acres and to carry out his plans of improvement, gave

employment to a large number of laborers, probably unequalled on any farm in the County. To the question once put to him by the speaker "whether his farming paid?" Mr. Dane replied that if he should strike a balance, he should take largely into account both the pleasure and health his farming had yielded him. He had found it necessary, and was so advised by his physician, to relieve his mind from the constant strain of business pursuits, and he preferred to indulge thus extensively in farming rather than go abroad and travel. His well kept grounds, his highly cultivated fields, his groups of buildings for different farm purposes, his flocks and herds with the numerous teams constantly at work, gave ample proof of the earnestness and liberality with which his operations were pushed. One of the last of his outlays was the setting out by the roadside on the border of one of his farms in Hamilton, a row of a hundred or more sugar maples, all of which are in a flourishing condition and will stand for years to come as a living testimonial to his memory.

Mr. Dane was one of the largest contributors to our Cattle Shows, and one of the most successful competitors for the Society's premiums. It had sometimes been said, indeed, that he carried off nearly all the large prizes. That for a period of eight years, covering his active membership, the yearly average of the premiums awarded him amounted to fifty dollars or more, is strictly true, but it will be found by an examination of the Treasurer's books that he had left unclaimed the whole amount to the credit of the Society.

Mr. Dane was eminently a business man of large views with a thorongh grasp of details, giving to the prosecution of his enterprises that personal attention that insured success. Some men are born to fortune and some men achieve it; Mr. Dane not only achieved his fortune but he dispensed with a liberal hand, leaving a signal illustration of the possibilities within the reach of the young men of our County.

Mr. Dodge then read the following resolutions and moved their acceptance and adoption. This motion being seconded, with remarks, by Paul D. Patch of Haverhill, formerly of Hamilton, was unanimously passed.

*Resolved.* That the members of this Society have learned, with deep regret of the recent and sudden death of their distinguished associate FRANCIS DANE, and would hereby record the expression of their profound sorrow at the great loss which they in common with the community at large, have sustained.

*Resolved.* That we shall ever retain a lively recollection of his many admirable traits of character, his genial manner, his public spirit and his active interest in every thing pertaining to farmers and the farm, and especially of his inspiring presence at our annual gatherings and his numerous and notable contributions to our public exhibitions.

*Resolved.* That a copy of these resolutions be communicated to the family of our deceased associate.

# Dr. EDWARD H, PAYSON, TREAS., IN ACC'T WITH THE ESSEX AG. SOCIETY Cr.

| | | | |
|---|---|---|---|
| 1874. | | | |
| September. | To balance of former account - | | $1193.02 |
| October. | To Bank dividends for October, 46.50 | | |
| | To receipts of Exhibition at Danvers per committee's report, - - 1356.32 | | |
| | To State County, - 600.00 | | |
| | | | 2420.82 |
| November. | To Bank tax refunded, - 251.48 | | |
| 29 | To Donation from Dr. Loring 10.00 | | |
| 30 | To Fees of New Members, 126.00 | | |
| | To Donations from Gen. Sutton, 40.00 | | |
| | | | 427.48 |
| 1875. | | | |
| February. 8 | To dividends of Gas Co. 24.00 | | |
| | To dividend First Nat. Bank, of Salem, - - 90.00 | | |
| | To Coupons of Essex R. Road. 21.00 | | |
| | | | 135.00 |
| April. | To Bank dividends for April, 574.20 | | |
| 12 | To rent of Treadwell Farm, 500.00 | | |
| | | | 1074.20 |
| July | To Coupons of Essex R. Road, 21.00 | | |
| | To dividends of Salem Gas Co. 24.00 | | |
| | | | 45.00 |
| September. | To unexpended of appropriation for premiums on Agricultural Implements, - - 70.00 | | |
| | To amounts of unclaimed premiums, - - 154.25 | | |
| | | | 224.25 |
| | | | $5519.87 |

| | | | |
|---|---|---|---|
| 1874. | | | |
| September. | By amount of Premiums and Gratuities awarded by Trustees, | | $1858.00 |
| | By expense of Exhibition at Danvers per committee's report | | 1356.66 |
| | By expenses of Exhibition paid by the Treasurer, - - | 390.95 | |
| | By sundry bills for Printing, | 437.30 | |
| | By rent of Hall, - - - | 25.00 | |
| | Perry & Tuckerman 55.00 B. P. Ware, 4.50, Barnett, 3.00, Felt, 12.62, on account of design on Fruit Plates | 75.12 | |
| | By Secretary's account - | 162.50 | |
| | By Advertising, - - - | 24.57 | |
| | By Premium paid 1873, - - | 2.00 | |
| | | | 1117.44 |
| | By Aggasiz Memorial, - - | 50.00 | |
| | By Scholarship G. R. Dodge, | 50.00 | |
| | | | 100.00 |
| | By expense on Farm, - - | 275.50 | |
| | By insurance of Farm buildings, | 43.25 | 318.75 |
| | By appropriation for premiums on Agricultural Implements, | | 100.00 |
| | By balance in hands of Treasurer, | | 669.02 |
| | | | $5519.87 |

# FUNDS BELONGING TO THE SOCIETY.

| | Cost on the books. | Present value. |
|---|---|---|
| 5 shares First Nat'n'l Bank of Danvers, par, | $375.00 | $500.00 |
| 18 shares First Nat'n'l Bank of Salem, cost | 1914.66 | 2250.00 |
| 16 shares Warren National Bank of Peabody, cost | 1595.40 | 2200.00 |
| 8 shares National Exchange Bank of Salem, par, | 800.00 | 960.00 |
| 12 shares Mercantile National Bank of Salem, cost | 1226.50 | 1450 00 |
| 23 shares Merchants National Bank of Salem, cost | 1189.50 | 1550.00 |
| 15 shares South Danvers National Bank cost | 1471,25 | 2250.00 |
| 5 shares National Revere Bank of Boston, cost | 585.87 | 580.00 |
| 42 shares Asiatic National Bank of Salem, cost | 1281.25 | 1700.00 |
| 18 shares Salem National Bank of Salem, cost | 2000.00 | 2400.00 |
| 6 shares Salem Gas Co. of Salem, cost | 687.75 | 688.00 |
| 3 bonds of Essex R. R. $500. $100. $100. | 700.00 | 700.00 |
| Amount of Cash as above $ 669.02 | | |
| Less unexpended appropriations $70.00 | 599.02 | 599.02 |
| | 14426.20 | 17827.02 |
| Funds on hand in 1874 | 15020.30 | |
| Loss in 1874-5 | $594.10 | |

Salem, September, 1875.

EDWARD H. PAYSON, Treasurer.

The subscriber has examined the foregoing accounts of receipts and disbursements of the Treasurer, and also his statement of the funds belonging to the Society, (showing a balance in his hands of $669.02) and find the same well vouched and correct.

CHARLES KIMBALL, Auditor.

Salem, January 11, 1876.

# OFFICERS OF THE SOCIETY.

FOR 1875-76.

---

PRESIDENT.

BENJAMIN P. WARE, of Marblehead.

---

VICE PRESIDENTS.

GEORGE B. LORING, of Salem.
PAUL T. WINKLEY, of Newburyport.
WARREN ORDWAY, of Bradford.
JAMES J. H. GREGORY, of Marblehead.

---

SECRETARY.

CHARLES H. PRESTON, of Danvers.

---

TREASURER.

EDWARD P. PAYSON, of Salem.

---

HONORARY TRUSTEES.

JOSEPH HOW of Methuen.
ALLEN W. DODGE, of Hamilton.
WILLIAM SUTTON, of Peabody,

TRUSTEES.

Joseph Akerman, Newburyport;
Charles C. Blunt, Andover;
George W. Boynton, Georget'n;
George B. Blodgett, Rowley;
J. H. Cheever, Manchester;
Caleb Childs, Marblehead;
George Cogswell, Bradford;
Daniel Carlton, No. Andover;
Thomas J. Clark, Salisbury;
George B. Dodge, Hamilton;
George A. Dodge, Wenham;
Levi Emery, Lawrence;
Henry W. Foster, Beverly;
Alonzo B. Fellows, Ipswich;
James Flint, Middleton;
Bennett Griffin, Gloucester;
Ariel H. Gould, Topsfield;
Joseph Z. Gordon, W't Newb'y
Joseph S. Howe, Methuen;
James P. King, Peabody;
Joshua N. Kent, Newbury;
E. K. Lee, Essex;
Nathaniel E. Ladd, Groveland;
Josiah Newhall, Lynnfield;
Francis P. Putnam, Danvers;
William H. Patch, Rockport;
Charles Perley, Boxford;
E. P. Robinson Saugus;
Allen Rowe, Swampscott;
Jackson B. Swett, Haverhill;
John L. Shorey, Lynn;
George W. Simmons, Nahant;
Aaron Sawyer, Amesbury;
Horace C. Ware, Salem;

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NEW MEMBERS—1875.

Wm. H. Allen, Manchester;
Amos P. Alley, Marblehead;
Reuben Alley, Marblehead;
James E. Alley, Marblehead;
Nathaniel Abbott, Salem;
P. D. Adams, Newburyp't;
James F. Almy, Salem;
L. L. Abbott, Danvers;
C. R. Anderson, Boxford;
S. B. Bodwell, Lawrence;
Wm. P. Bailey, W Newbury;
C. S. Bradley, West Newbury;
Elijah Bradstreet, Danvers;
C. H. Beckford, Salem;
John A. Blake, Danvers;
Wm. H. Brown. Danvers;

Willis Barnard, Danvers;
Chas. S. Clark, Salem;
Addison Childs, Marblehead;
S. F. Crosman, Swampscott;
John Dennis, Marblehead;
Albert W. Dodge, Hamilton;
Walter F. Dodge, Beverly;
John J. Downing, Andover;
Winslow W. Eaton, Danvers;
C. F. Emerton, Peabody;
Israel Fellows, Salem;
Franklin Fisher, Danvers;
George Faxon, Danvers;
James T. Fields, Manchester;
Ira Foster, Peabody;
Samuel F. Gooking, Danvers;
Oscar Gowen, West Newbury;
D. B. Gardner, Salem;
John O. Goodwin, N. Andover;
John Gibney, Salem;
Henry Gardner, Peabody;
Rufus Goodwin, Haverhill;
Edward L. Hill, Danvers;
R. B. Hood. Danvers;
Joseph E. Hood, Danvers;
Edward Hutchinson, Danvers;
C. R. Hutchinson, Peabody;
Albert G. Ham, Danvers;
N. A. Horton, Salem,
Lewis G. Holt, Lawrence;
Eben Jackson, Salem;
J. T. Johnson, No. Andover;
Conrad Juul, Danvers;
Arthur Kemble, Salem;
Otis L. Kent, Newbury;
Albert S. Kent, Newbury;
Edward Kent, Newbury;
Herbert A. Knowlton, Essex;
G. Augustus King, Peabody;
J. M. Knight, Salem;
J. Kavanagh, Wenham;
C. A. Lawrence, Beverly;
John Linehan, Peabody;
Samuel W. Lewis, Danvers;
Alexander Lewis, Danvers;
Andrew Mansfield, Lynnfield;
Patrick Murphy, Danvers;
Beverly S. Moulton, Danvers;
Ransom F. McCrillis, Danvers
Walter T. Martin, Danvers;
E. H. Merrill, Danvers;
Orlando F. Newhall, Peabody;
Joseph Newhall, Saugus;
Benj. E. Newhall, Danvers;
George A. Needham, Peabody;
William Noble, Saugus:
Samuel W. Nourse, Danvers;
Philip L. Osborne, Peabody;
George H Peabody, Danvers;
John W. Porter, Danvers;
George W. Pepper, Peabody;
Abraham Patch, Jr., Danvers;
William Pickering, Jr., Salem;
D. B. Prime, Rowley;
Benjamin Pickering, Salem;
Henry A. Perkins, Danvers;

John G. Page, Salem ;
Edward P. Perley, Danvers ;
Daniel P. Pope, Danvers ;
Wm. B. Reynolds, N. Andover;
Chas. B. Rice, Danvers ;
James Richardson, Danvers ;
Moses E. Reynolds, Salem ;
Henry E. Reynolds, Salem ;
George W Russell, Lawrence ;
George D. Richards, Danvers ;
Chauncey S. Richards, Danvers;
John C. Ropes, Salem ;
Julius F. Rabardy, Manchester;
O. B. Shreve, Salem ;
John L. Smart, Danvers ;
E. Swazey, Danvers ;
Russell Sturgis, Jr., Manchester;
Shattuck, Lawrence ;
J. A. J. Sawyer, Lynn ;
A. C. Saunders, Haverhill ;
James W. Trask, Danvers ;
William Treadwell, Ipswich ;
Josiah B. Thomas, Peabody ;
Frank White, Salem ;
David P. Waters, Salem ;
Joseph Whitehead, Saugus ;
Louis Wiel, No. Andover ;
E. A. Whipple, Hamilton ;
Aaron Winslow, Swampscott ;
Henry B. Winslow, Middleton ;
E. T. Waldron, Danvers ;
T. O. Wardwell, No. Andover.

☞ Any citizen in the County may become a member by paying the sum of three dollars to increase the permanent funds of the Society, and he will receive a certificate of his membership from the Secretary. No fines or assessments are ever imposed. Members are entitled to the free use of the Library, which is kept in Plummer Hall, Salem, and a copy of the Transactions each year. All ordained Ministers of the Gospel residing in the County, and editors of newspapers, published therein, are entitled to the privileges of the Library.

# LIST OF PREMIUMS, &C.

FAT CATTLE.

| | |
|---|---|
| Henry Gardiner, Peabody, 1st premium, | $ 12.00 |
| William A. Russell, No. Andover, 2d premium, | 10.00 |
| Henry Gardiner, Peabody, 3d premium, | 6 00 |
| S. & N. Longfellow, West Newbury, 4th premium | 5.00 |

BULLS, TWO YEARS OLD AND UPWARDS.

| | |
|---|---|
| T. O. Wardwell, No. Andover, Ayrshire, 1st premium, | 12.00 |
| Nathan P. Proctor, Danvers, Ayrshire, 2d premium, | 6.00 |
| J. Longfellow, Newbury, Jersey, 1st premium, | 12.00 |
| W. A. Russell, No. Andover, Dutch, 1st premium, | 12.00 |
| Shattuck Bros., Lawrence, Short Horns, 1st premium, | 12.00 |

BULLS, UNDER TWO YEARS.

| | |
|---|---|
| W. A. Russell, No, Andover, 1st premium, | 6.00 |
| W. A. Russell, No. Andover, 2d premium, | 4.00 |

MILCH COWS.

| | |
|---|---|
| George B. Dodge, Hamilton, 1st premium, | 25.00 |
| E. Swazey, Danvers, 2d premium, | 12.00 |
| Frederick Burnham, Manchester, 3d premium, | 5.00 |

AYRSHIRE.

| | |
|---|---|
| Benj. P. Ware, Marblehead, 1st premium, | 12.00 |
| Thomas Cass, Topsfield, 2d premium, | 6.00 |

JERSEY.

| | |
|---|---|
| George W. Russell, No Andover, 1st premium, | 12.00 |
| J. Bardwell, Beverly, 2d premium, | 6.00 |

DUTCH OR HOLSTEIN.

William A. Russell, No. Andover, 1st premium, 12.00
William A. Russell, No. Andover, 2d premium, 6.00

NATIVE OR GRADE.

S. F. Crossman, Swampscott, 1st premium, 12.00
George W. Frazier, Lynn, second premium, 6.00

HERD OF MILCH COWS.

Benjamin P. Ware, Marblehead, 1st premium, 18.00

HEIFERS.

Ben Perley Poore, W. Newbury, Short Horns, 1st premium, 6.00
Ben Perley Poore, W. Newbury, Short Horns, 2d premium, 4.00
Benjamin P. Ware, Marblehead, Ayrshire, 1st premium, 6.00
James Manning, Topsfield, Ayrshire, 2d premium, 4.00
George W. Russell, No. Andover, Jerseys, 1st premium, 6.00
James S. Green, Hamilton, Jerseys, 2d premium, 4.00
W. A. Russell, No. Andover, Dutch, (in milk) 1st premium, 12.00
W. A. Russell, No. Andover, Dutch, (in milk) 2d premium, 6.00
Albert W. Dodge, Hamilton, Grade, (in milk) 1st premium, 12.00
E. Swazey, Danvers, Grade, (in milk) 2d premium, 6.00
Peter Lynn, Danvers, Grade, (not in milk) first premium, 6.00
J. H. Cheever, agent for Mr. Lathrop, Manchester,
Grade, (not in milk) 2d premium, 4.00
Geo. W. Russell, No. Andover, Jersey Calf, 1st premium, 5.00
J. H. Cheever, agent Manchester, Jersey Calf,
2d premium, 3.00
W. A. Russell, No. Andover, Dutch Calves, 1st premium, 5.00
W. A. Russell, No. Andover, Dutch Calves, 2d premium, 3.00
S. A. Merrill, Danvers, Grade Calves, 1st premium, 5.00
Theron Johnson, No. Andover, Grade Calves, 2d premium, 3.00
J. W. Scidmore, Peabody, Twin Calves, gratuity, 3.00

WORKING OXEN AND STEERS.

| | |
|---|---|
| A. H. Gould, Topsfield, 1st premium, | 15.00 |
| William A. Russell, North Andover, 2d premium, | 12.00 |
| Charles P. Preston, Danvers, 3d premium, | 10.00 |
| Asa T. Newhall, Newburyport, Steers, 1st premium, | 10.00 |
| Horace C. Ware, Salem, 2d premium, | 6.00 |

STEERS.

| | |
|---|---|
| Romulus Jaques. W. Newbury, 3 years old, 1st premium, | 8.00 |
| S. & N. Longfellow, Groveland, 2d premium, | 6.00 |
| George F Mason, Andover, 2 years old, 1st premium, | 6.00 |
| J. Frank Foster, North Andover, 2d premium, | 5.00 |

TOWN TEAMS.

| | |
|---|---|
| Town of Danvers, 22 pair Oxen, 1st premium, | 30.00 |
| Town of Topsfield, 20 pairs Oxen, 2d premium, | 15.00 |
| Danvers Horse Team, 8 Horses, 1st premium, | 30.00 |
| Danvers Horse Team, 16 Horses, 2d premium, | 15.00 |

STALLIONS.

| | |
|---|---|
| Charles S. Clark, Salem, 4 years old, 1st premium, | 18.00 |
| James M. Knight, Salem, 2d premium, | 12.00 |
| S. B. Gregory, Hamilton, 3d premium, | 10.00 |
| Thomas W. Pierce, Topsfield, 3 years old, 1st premium, | 10.00 |
| George W. Rogers, Peabody, 2d premium, | 6.00 |

BROOD MARES.

| | |
|---|---|
| T. W. Pierce, Topsfield, 1st premium, | 18.00 |
| Reuben Alley, Marblehead, 2d premium, | 12.00 |
| C. J. Norwood, Hamilton, 3d premium, | 10.00 |

FAMILY HORSES.

| | |
|---|---|
| Charles H. Gould Danvers, 1st premium, | 18.00 |
| William A. Dane, Hamilton, 2d premium, | 12.00 |
| Moses C. Reynolds, Salem, 3d premium, | 10.00 |

T

FARM AND DRAFT HORSES.

| | |
|---|---|
| Asa T. Newhall, Newburyport, 1st premium, | 15.00 |
| E. F. Knowlton, Essex, 2d premium, | 12.00 |
| H. L. Tenney, Newbury, 3d premium, | 10.00 |
| Joshua Roberts, Gloucester, 4th premium, | 6.00 |

PAIRS OF DRAFT HORSES.

| | |
|---|---|
| Edward P. Perley, Danvers, 1st premium, | 15.00 |
| David Knowlton, Essex, 2d premium, | 10.00 |
| William Noble, Saugus, best Teamster of Horses, 1st premium, | 10.00 |

COLTS—FIRST CLASS.

| | |
|---|---|
| J. W. Trask, Beverly, 4 years old, 1st premium, | 12.00 |
| Cyrus W. Wilkins, Peabody, 2d premium, | 8.00 |
| John Gibney, Salem, 3d premium, | 5.00 |
| John Gibney, Salem, 3 years old, 1st premium, | 10.00 |
| Henry A. Hardy, Danvers, 2d premium, | 5,00 |

COLTS—SECOND CLASS.

| | |
|---|---|
| Asa T. Newhall, Newburyport, 2 years old, 1st premium, | 8.00 |
| R. P. Cushman, Haverhill, 2d premium, | 3.00 |
| William H. Brown, Peabody, yearlings, 1st premium, | 8.00 |
| George W. Rogers, Peabody, 2d premium, | 3.00 |

SWINE—LARGE BREEDS.

| | |
|---|---|
| David W. Low, Gloucester, Chester Boar, 1st premium, | 10.00 |
| Joseph Kittredge, North Andover, Columbia County Boar, 2d premium, | 6.00 |
| Benjamin P. Ware, Marblehead, breeding sow, 1st premium, | 10.00 |
| W. J. Dale, Jr., No. Andover, Yorkshire sow, 2d premium, | 6.00 |
| Daniel Carlton, No- Andover, litter weaned pigs, 1st premium, | 6.00 |

SWINE—SMALL BREEDS.

| | |
|---|---|
| R. G. Buxton, Peabody, boar, 1st premium, | 10.00 |
| W. J. Dale, Jr., No. Andover, Berkshire Boar, 2d premium, | 6.00 |
| T. O. Wardwell, No. Andover, Essex sow, 1st premium, | 10.00 |
| T, O. Wardwell, No. Andover, Berkshire sow, 2d premium, | 6.00 |

SHEEP.

| | |
|---|---|
| E. W. Jacobs, Peabody, flock, 1st premium, | 10.00 |
| Joseph Kittredge, No. Andover, flock, 2d premium, | 6.00 |
| E. W. Jacobs, Peabody, lambs, 1st premium, | 4.00 |
| Willie G. Horton, Ipswich, buck, 1st premium, | 8.00 |

PLOUGHING—DOUBLE TEAMS.

| | |
|---|---|
| R. T. Jaques and R. S. Bray, Newbury, 1st premium, | 12.00 |
| Jacob L. Farnum, North Andover, 2d premium, | 10.00 |
| Jacob E. Spring, Danvers, 3d premium, | 9.00 |
| Joseph Horton, Ipswich, 4th premium, | 8.00 |

PLOUGHING—SINGLE TEAMS.

| | |
|---|---|
| Asa T. Newhall, Newburyport, 1st premium, | 10.00 |
| J. P. Palmer, Swampscott, 2d premium, | 7.00 |
| Chas. P. Preston, Danvers, 3d premium, | 5.00 |

PLOUGHING—HORSES.

| | |
|---|---|
| Kavanagh Bros. Wenham, 1st premium | 12.00 |
| A. T. Newhall, Newburyport. 2d premium, | 10.00 |
| R. S. Bray. Newbury; 3d premium, | 8.00 |
| Edward P. Perley, Danvers, 4th premium, | 6.00 |
| G. W. Russell, North Andover, 5th premium, | 4.00 |

PLOUGHING WITH SWIVEL PLOUGH.

| | |
|---|---|
| Foster & Russell, North Andover, 1st premium, | 12.00 |
| Albert Titcomb, Rowley, 2d premium, | 10.00 |
| Sylvester Dane, Hamilton, 3d premium, | 8.00 |
| A. H. Gould, Topsfield, 4th premium, | 5.00 |

PLOUGHING—BY BOYS.

| | |
|---|---|
| Aaron Winslow, Swampscott, 1st premium, | 25.00 |
| Walter F. Dodge, Beverly, 2d premium, | 15.00 |
| Chas. S, Smith, Hamilton, 3d premium, | 10.00 |

AGRICULTURAL IMPLEMENTS.

| | |
|---|---|
| Ames Plow Co., Boston, collection of implements, grat'y, | 15 00 |
| Whittemore Bros., " " " " " | 10 00 |
| S. A. Merrill, Danvers, Buckeye mower, | 5.00 |
| S. A. Merrill, " Nye Bay State rake, | 5.00 |
| S. Frank Ayers, Boxford, ox yoke, | 3.00 |
| Andrew Dowbridge & Co., Salem, patent roofing, | 3.00 |
| Geo. W. Rogers, Peabody, double mould board plow, | 3.00 |
| S. S. Hickok, Methuen, potato digger, | 10.00 |
| S. S. Hickok, " castor, | 1.00 |

CARRIAGES.

| | |
|---|---|
| Sawyer & Chase, Lynn, carriages, diploma and | 15.00 |
| Wm. B. Peart, Danvers, express wagons, gratuity, | 10.00 |
| W. H. Brown, Danvers, farm wagons, | 5.00 |
| H. H. Pillsbury, " display of carriages. | 10.00 |

DAIRY.

| | |
|---|---|
| G. W. Russell, North Andover, butter, 1st premium. | 10.00 |
| W. H. Allen, Manchester, 2d premium, | 8.00 |
| Mrs. J. R. Bailey, Bradford, 3d premium, | 6.00 |

IMPROVING WET MEADOWS, &c.

| | |
|---|---|
| Samuel Dane, Hamilton, 1st premium, | 15.00 |

IMPROVING PASTURES, &c.

| | |
|---|---|
| Joseph Horton, Ipswich, 1st premium, | 15.00 |

UNDERDRAINING LAND.

| | |
|---|---|
| J. J. H. Gregory, Marblehead, 1st premium, | 15.00 |

GRAIN CROPS.

Oliver P. Killam, Boxford, Corn, 1st premium, 10.00

ROOT CROPS.

S. A. Merrill, Danvers, Carrots, 1st premium, 10.00
S. A. Merrill, Danvers, Cabbages, 1st premium, 10.00
J. J. H. Gregory, Marblehead, Beets, 1st premium, 10.00
J. J. H. Gregory, Marblehead, Squashes, 1st premium, 10.00
J. J. H. Gregory, Marblehead, Onions, 1st premium, 10.00
James Manning, Topsfield, Ruta Bagas, 1st premium, 10.00
Ira F. Burnham, Essex, Onions, 1st premium, 10.00

ESSAYS AND REPORTS OF COMMITTEES.

Francis H. Appleton, Peabody, Essay, 1st premium, 15.00
J. D. W. French, No. Andover, Report, 1st premium, 10.00
T. C. Thurlow, West Newbury, Report, 2d premium, 8.00
J. J. H. Gregory, Marblehead, Report, 3d premium, 6.00
Awarded by Committee on Mowing Match, 95.00
" " " " Poultry, 133.00
" " " " Vegetables and Seeds, 145.00
" " " " Fruits, 337.00
" " " " Flowers, 54.50
" " " " Counterpanes, Rugs, &c., 36.00
" " " " Fancy Articles, 55.50
" " " " General Merchandise, 17.50
" " " " Bread and Honey, 20.50
" " " " Articles manf'd from Leather, 15.00

$ 2,252.00

## RECAPITULATION,

FARMS.

Amount awarded to Ploughing, $186.00
" " Improving Wet Meadow &c. 15.00

| | | | |
|---|---|---|---|
| Amount awarded to improving Pasture, | | 15.00 | |
| " " | Underdraining, | 15.00 | $231.00 |

FARM STOCK

| | | | |
|---|---|---|---|
| Amount awarded to | Fat Cattle, | 33.00 | |
| " " | Bulls | 64.00 | |
| " " | Milch Cows | 132.00 | |
| " " | Heifers | 103.00 | |
| " " | Working Oxen | 53 00 | |
| " " | Steers | 25.00 | |
| " " | Town Teams | 90.00 | |
| " " | Stallions | 56.00 | |
| " " | Brood Mares | 40.00 | |
| " " | Family Horses | 40.00 | |
| " " | Farm and Draft Horses | 43.00 | |
| " " | Pairs of Draft Horses | 35.00 | |
| " " | Colts, | 62.00 | |
| " " | Swine | 70.00 | |
| " " | Sheep | 28.00 | |
| " " | Poultry | 133.00 | $1007.00 |

FARM PRODUCTS, &c.

| | | | |
|---|---|---|---|
| Amount awarded to | Dairy | 24.00 | |
| " " | Fruit | 337.00 | |
| " " | Flowers | 54.75 | |
| " " | Vegetables | 145 00 | |
| " " | Grain Crops | 10.00 | |
| " " | Root Crops | 70.00 | |
| " " | All other objects | 373.25 | $1014.00 |
| | | | $ 2252.00 |

# List of Members

OF THE

# Essex Agricultural Society.

---

Note—Those marked with a * deceased since 1869; with † removed from the county. For names of members deceased previous to 1869, refer to list published that year.

## AMESBURY.

Bailey, O. S.
*Bailey, Thomas
Binney, William C.
Cole, Augustus K.
Currier, J. M.
Evans, John
Goodwin, A. E.
Gunnison, William
Haskell, William H.
Hill, J. Henry
Huntington, B. F.
Jones, Philip
Loud, C. H.
†Moore, Appleton
Morse, Daniel L.
*Morse, John S.
Nichols, Charles H.
*Nichols, Stephen Jr.
Patten, T. B.
Quimby, Thomas W.
Sargent, J. B.
Sargent, Orlando
Sargent, Patten
Sargent, Willis
Sawyer, Aaron
Sawyer, Thomas C.
Tukesbury, D. M.

## ANDOVER.

Abbott, Nathan F.
Abbott, Asa A.
Abbott, George A.
Abbott, Hartwell B.
Abbott, John B.
*Abbott, Johnathan
Abbott, Moody B.
Abbott, Stephen D.
*Abbott, Sylvester
Andrews. Moses C.
*Ballard, Joshua
Bardwell, Simeon
Blunt, Charles C.
Blunt, Milton J.
†Bodwell, Henry A.
*Bond, William
Callahan, Robert
Carter, Charles F.
Carruth, Isaac
†Chamberlain, N. Jr.
*Chandler Joseph
Cheever, James O.
Chickering, William
†Chipman, Degrass
*Clark, Hobart
Cummings, C. O.
Downing, J. J.
†Farnham, John C.
†Flagg, Wilson
*Flint, John
Foster, George
Foster, George W.
Foster, Moses, Jr.
*Foster, Thomas C.
Flint, John H.
†French, Charles

†French, George H.
*Gray, David
Harnden, Henry C.
Hazen, Nathan W.
Hidden, David I. C.
Holt, Dean
Holt, E. F.
†Holt, Herman
*Holt, H. P.
Holt, Joseph S.
Jenkins. John B.
Jenkins, Kendall
Johnson, Francis H.
Kimball, Walter H.
Mason, George F.
*Merrill, William
Morton, Marcus
*Needham, Samuel
*Pettingill, Merrill
Phelps, Herman
†Pierce, William
Pillsbury, Paul P.
Raymond, Samuel
Rea, Jasper
Rogers, Fitzwilliam
Smith, Peter
Upton, Edward C.
*Whittier, Nathaniel

## BEVERLY.

Abbot, Jos. D.
Appleton, Isaac
Avery, Mark B.
Baker, John I,
Baker, Stephens
Bell, John
Chase, Samuel
Cole, Zachariah
Conelly, Stephen
Cressy, Joseph
Dodge, Aaron
Dodge, Andrew
Dodge, Benjamin N.
Dodge, Benjamin S.
Dodge, Joshua S.
Dodge, Richard
Dodge, George F.
Dodge, Forest C.
Dodge, Walter F.
*Dodge, William E.
Edwards, Ephriam A.
Edwards, Israel O.
Foster, Henry W.
*Friend, Seth
Friend Seth
Griswold, A.
Giles, Benjamin V.
Gould, Thomas
*Hathaway, John
Haven, Franklin
Herrick, Joseph H.
Hill, Hugh
Larcom, David
*Lord, Abraham,
Lord, Cyrus W.
Lawrence, C. A.
Lovett, John H.
Lovett, Francis S.
Lummus, E. E.
*Marshall, Timothy
Mason, Alfred A.
Mason, Alphonso
Mason, George
Mason, Lyman
McDonald, Daniel
Meacom, John
Mitchell, Charles
Munsey, John G.
Paine, Charles C.
Pitman, Mark
Porter, Adoniram
*Porter, John
†Porter, Robert
†Safford, Nathan'l T,
*Sheldon, Jesse
Standley, Sam'l D. G.
Scott, Benjamin
Stephens, Augustus
†Stone, Edwin M.
Trask, James W.
Walker, Lawson
Waters, Richard P.
†Waters, William C.
Wilson, Joseph

## BOXFORD.

Anderson, Cha's R.
Andrew, Isaac W.
Barnes, B. S.
Chadwick, Geo. W.
Cleveland, James P.
*Cleveland, Wm. N.
Cole, David M.
Cole, John K.
Curtis, Francis
Day, John
*Day, Joshua T.
†Gould, Jacob

*Hale, Isaac
Hale, John
Harriman, Daniel F.
Herrick, Israel
Killam, Oliver P.
Kimball, Samuel
†Palmer, Chas. Lane
Palmer, F. H.
Peabody, Stephen
Pearl, John M.
Perley, Charles
Sawyer, Thomas
Wood, Enoch
Wood, John T.

## BRADFORD.

Carlton, James T.
Chadwick, Henry M.
Cogswell, George
Cogswell, William
Day, Albert J.
Day, Hiram
Day, Lafayette
Day, Royal
Elliot, William
Ellis, John A.
Emerson, Charles B.
Haseltine, Thomas
Haseltine, William
Hopkinson, Sam'l W.
Johnson, A. P.
*Johnson, Charles G.
Johnson, Laburton
Kimball, Albert
Kimball, A. Laburton
*Kimball, David
Kimball, Henry G.
Kimball, Leverett
*Kimball, Seth
*Kimball, Sylvester
Kimball, William B.
Kimball, W. Eustace
Little, M. P. Mrs.
*Locke, Oliver
Merrill, John F.
Morse, C. E.
Ordway, Alfred
*Ordway, Enoch F.
Ordway, G. W.
Ordway, Warren
Peabody, Frank
Peabody, Daniel
Perley, John
Perry, Samuel B.
Sawyer, Samuel C.
Tewksbury, John B.
Thornton, William
Webster, Charles E.

## DANVERS.

Abbott, L. L.
Allen, Henry C.
†Adams, Marshall C.
Bartlett, James A.
Berry, Allen A.
Berry, Eben G.
Batchelder, J. Q. A.
Bradstreet, Elijah
Blake, John A.
Brown, William H.
Barnard, Willis
Black, William
Boardman, I. P.
Brown, Amos
Brown, Charles W.
Butler, J. C.
Clark, N. J.
*Cummings, Sam'l P.
†Devereux, Geo. F.
Demsey, L. P.
Dodge, Elnathan
Dodge, Francis
*Dodge, William, Jr.
Eaton, Winslow W.
Fellows, Alfred
Fisher, Franklin W.
Faxon, George
Fowler, Augustus
Fowler, Samuel P.
*French, George W.
Gaffny, Cornelius
Gookin, Samuel F.
Gould, Charles H.
Grosvenor, David A.
†Holden, Seth
Hyde, Elisha G.
Hill, Edward L.
Ham, Elias
Hood, R. B.
Hatch, W. G.
Hood, Joseph E.
Hutchinson, Edward
Ham, Albert G.
Juul, Conrad
Kimball, Joel, Jr.
Lane, Benjamin T.
Langley, J. R.
Learoyd, A. P.

Legro, Edmund
Legro, John C. P.
Lewis, Samuel W.
Lewis, Alexander
Lyford, Francis W.
Martin, George B.
*Massey, S. D.
Martin, Walter F.
MCrillis, Ransom F.
*Merrill, Ernest S
Merrill, Levi
Merrill, Samuel A.
Merrill, Walter S.
Merrill, E. H.
Moulton, Beverly S.
Mudge, Edwin
Mudge, Augustus
Murphy, Patrick
Nichols, Andrew
Newhall, Benj. E.
Nourse, Samuel W.
Page, Nathan, Jr.
Patch, Abraham, Jr.
Peart, William B.
Perley, A. P.
Perley, Frederick
Perkins, Henry A.
Perley, Edward P.
Perry, James M.
Pettingill, David A.
Peabody, George H.
Pope, Ira P.
Porter, Bdnjamin F.
Pratt, Amos
Preston Charles P.
Preston, John
*Preston, John S.
Preston, Samuel
Prince, Amos
Putnam, Charles O.
*Putnam, Eben
Putnam, Edwin F.
Putnam, Francis P.
Putnam, Israel H.
Putnam, Joseph C.
Putnam, J. A.
Putnam, Joel
Putnam, Orrin
Putnam, Otis F.
*Putnam, Rufus
Pratt, George
Porter, John W.
Pope Daniel P.
Richardson, J. B.
Richardson, James
Richards, Daniel
Richards, C. S.
Richards, Geo. D.
Roberts, Joshua
Ropes, Joseph W.
Rice, Charles B.
Sears, John A.
Silvester, Joshua
Spaulding, Sam'l W.
Swan, Sylvanus B.
Swinerton, John
Smart, John L.
Swazey, E.
Spring, Jacob E.
Tapley, Charles
Tapley, George
Tapley, Gilbert
Tapley, Gilbert A.
*Tapley, Nathan
Tufts, Benjamin F.
Tracy, Joseph
Upton, Franklin W.
Waite, Peter
Walcott, Wm. H.
Wallis, Samuel
Warren, Aaron W.
Warren, Jonas
Weston, Wm. L.
White, Amos A.
White, Henry A.
*Wilkins, Joel
Woodis, Alden B.
Waldron, E. T.

## ESSEX.

Andrews, Elias
Andrews, Elihu
Andrews, Joseph
Andrews, Miles S.
Burnham, D. Brainard
Burnham, Washing'n
Burnham, Wm. Howe
*Choate, David
Choate, Rufus
Cogswell, Chas. B.
Dodge, Grover
Haskell, David L.
Haskell, George
Knowlton, Aaron
Knowlton, David
Knowlton, Moses
Knowlton Herbert A.
Lee, Edward K.
Low, Aaron
Low, Josiah
Lufkin, A. E.
Mears, Wm. H.
Perkins, John
Story, Andrew
Story, Ephriam

## GEORGETOWN.

*Adams, George E.
Bateman, A. P.
Boynton, George W.
Butler, Oliver S.
Chapman, Jonathan
Dole, Moody S.
Dole, Richmond
Harriman, Hiram N.
Hoyt, John A.
Jewett, Jacob F.
*Jewett, Robert
Lambert, Nathaniel
Little, Samuel
Lovering, John H.
Moulton, Daniel E.
*Nelson, Charles
Nelson, Sherman
Nelson, Solomon
Nelson, William
Osgood, Stephen
Pettingill, Henry
Pillsbury, J.
Poor, Samuel T.
Preston, John
*Sanborn, George W.
Spofford, Sumner P.
Tenney, George J.
Tenney, Gorham D.
Tenney, Milton G.
Tenney, Moses
Tenney, Orlando B.
Tenney, Richard
Wheeler, William S.
*Wildes, Green
Wilson, Isaac

## GROVELAND.

Atwood, Daniel
Atwood, Moses P.
Balch, Eustis
Balch, Thomas H.
Burbank, John
Clark, Elijah
Curtis, Edwin T.
Day, Isaac C.
Fegan, Henry C.
Hardy, Ira
Harrington, Edward
Hopkinson, W. H.
Kimball, Charles
Ladd, John I.
Ladd, Nathaniel E.
Longfellow, Samuel
Ordway, Leverett S.
Ordway, Moody
*Parker, Benjamin
Parker, Eldred S.
Pemberton, L. K
Savary, Charles G.
Savary, Charles P.
Spofford, Jeremiah
Spofford, Morris
Stickney, Abel
Stickney, Daniel H.
Stiles, Charles F.
Wales, Herbert E.
Walker, George S.
Wardwell, Z. C.
Woodman, Ira S.

## GLOUCESTER.

Atkinson, John
Babson, Daniel T.
Babson, Fitz J.
†Babson, Gustavus Jr.
Babson, Horatio
Babson, John J.
Barrett, Charles P.
Boynton, Charles
Bradford, George R.
Bray, Aaron W.
Brown, Edward, H.
Burnham, A. M.
Burnham, H. A.
Burnham, S. A.
Butler, Benjamin F.
Calef, John C.
Campbell, C. H.
Carter, John S.
Carter, Sherman J.
Clark, John
Cole, Israel H.
Conant, Thomas
Cook, Benjamin F.
Corliss, Benjamin H.
Corliss, John
Cressy, Curtis C.
Cronin, John,
Dale, Eben Jr.
Davis, James
Davis William P.
Day, Abraham
Dennin, George
Dennison, C. W.
Dodd, Stephen,
Dolliver, John H.
Dolliver, William C.

Dolliver, William P.
Dyer, J. Franklin
Emanuel, Henry
Fears, Robert
Fears, Robert R.
Foster, Jeremiah
Friend, Elbridge G.
Garland, Joseph
Gilbert, Addison
Griffin, Bennett
Grover, Charles E.
Hadley, William
Harvey, Alonzo F,
Haskell, H. C. L.
*Haskell, Thomas
Haskell, William H.
Herrick, Gardner W.
*Hough, Benjamin K.
Hoyt, Edward C.
James, George
James, Samuel
Jones, William
Knowles, Thomas J.
Lane, Andrew
Lane, George
Lancester, T. S.
Lawrence, R. C.
*Lindberg, A. F.
Loring, Francis M.
Low, David W.
Low, Gorham P.
Marr, Chester, Jr.
Mayo, Israel C.
Mayo, Josiah, Jr.
McFarland, L.
Merchant, E. W.
Norwood, George
Parsons, William, 2d.
Parsons, W. Frank
Patch, Isaac
Pattillo, Alexander
*Pearce, Edward H.
Perrin, Henry S.
*Perrin, William H.
Pew, William A.
Phillips, N. H.
Plummer, David
Presson, David S.
Price, Augustus E.
Proctor, Joseph O.
Proctor, Wilbur F.
Ricker, Richard W.
Rogers, Allan
Rogers, John S.
Rogers John S. E.
Rust, William P.
Sanford, H. G.
Sawyer, Samuel E.
Shepard, Joseph C.
Smith, Benjamin H.
Somes, John E.
Stacey, Eli F.
Stacey, John H.
Stanwood, Barnard
Staten, Edward
*Stevens, Zachariah
Story, Cyrus
Thompson, Chas. P.
Tibbetts, Robert A.
Todd, John
Webster, Nathaniel
Wetherell, M. L.
Wilson, John J.
Witham, Addison
Wonson, August's H.
Wonson, F. G.
Wonson, George M.
Wonson, J. W.
York, Nathaniel S.

## HAMILTON.

Abbott, Joseph B.
Allen, Francis R,
*Brown, Jacob
Brown, William A.
Dane, Ephriam A.
*Dane, Francis
Dane, George
Dane, George E. F.
Dane, Samuel
Dane, William A.
Dane, Sylvester
Dodge, Albert W.
Dodge, Allen W.
Dodge, Emerson P.
Dodge, George B.
Dunnels, Ira A.
Gregory, Sma'l. B.
Kimball, Isaac W.
Knowlton, Isaac
Knowlton, Isaac F.
Knowlton, Joseph
Lamson, Jarvis
*Morgan, Luther S.
Norris, George
Patch, Mrs. Oliver
Porter, Dudley H.
Porter, Oliver
Rankin, Eli C.
Rankin, George C.
Safford, Daniel E.
Smith, Alvin
Smith, John
*Whittredge, John
Whipple, Em. O.

# HAVERHILL.

Barry, J. M.
*Partlett, James A.
Bodwell, Stephen
Brickett, Barnard
Brickett, Daniel
Brickett, Daniel H.
Brickett, Franklin
Butters, Charles
Caldwell, William
*Carlton, John
Carlton, Samuel
Carlton, William B.
Chase, Abel W.
Carlton, Nathaniel
Chase, C. W.
Cheever, H. W.
Clark, William P.
†Coburn, A. M.
Coffin, George
Cook, Justin T.
Corliss, Charles
Cummings, Henry
Currier, Samuel M.
Cushman, R. P.
Davis, George W.
Davis, Phineas E.
Dewhurst, James
*Dunbar, Charles H.
Duncan, George W.
Eaton, Harrison
Elliott, Samuel
Elliott, Samuel H.
Emerson, Albert
Emery, Benjamin E.
Emery, Moses G. J.
Farnsworth, J. H.
†Farrar, Joseph E.
Fellows, Samuel
Fitts, D. F.
Flanders, Daniel D.
†Fletcher, Edmund
Frothingham, E. G.
Gage, Edmund
Gale, James E.
Gardner, John
Goodwin, Rufus
*George, M. D.
Gile, James F.
Gilman, John P.
Goodrich, T. J.
Grieves, J.
Hale, Samuel
*Harding, Thomas
*Harmon, David P.
Haseltine, Amos Jr.
*Haseltine, Hazen
Holt, Charles
†Hooke, Daniel
How, Moses
Howe, Nathaniel S.
*Hoyt, George H.
*Hoyt, Humphrey
Ingalls, E, T.
Jeffers, William
*Keely, John
Kittredge, Alfred
Lackey, Andrew
†Lee, George W.
†Little, Edmund B,
Little, J. G. S.
Marsh, John J.
Merrill, William
Mitchell, E.
Moody, H. L.
Mitchell, Seth K.
Morse, John
Morse, S. E.
Nichols, James R.
†Nichols, John A.
Nichols, John B.
*Noyes, James
Noyes, Johnson
†Oberton, W. W. S
Ordway, Joshua H.
Patch, Paul D.
*Plummer, Hiram
Porter, Dudley,
*Porter, Ebenezer
Putnam, Moses W.
Randall, John P.
Richards, William B.
Richardson, John B.
Rigdway, Joseph N.
Roberts, Stephen
Robinson, Edwin
Savary, Robert
Sleeper, Sherburne C.
*Slocum, Rufus
Smiley James V.
Smith, Jesse
Saunders, A. C.
Saunders, Thomas
Spiller, J. B.
Stewart, John
Swett, Jackson B.
Taylor, Levi
Taylor, Martin
Taylor, Oliver
Titcomb, Benaiah
*Tompkins, Christ'r
Towle, Samuel K.
†Turner, James
Wadleigh, Levi C.
*Webster, David
Webster, Ebenezer
Webster. E. F.

*Webster, Nathan
Webster, Richard
†Welch, Ezra B.
West, H. K.
West, James F.
West, Thomas
Wheeler, Allison
White, James D.
Whittier, Alvah
*Whittier, Leonard
Whittier, Warner R.
Winchell, James H.
*Wingate, Moses

## IPSWICH.

*Andrews, David
Andrews, Theodore
Appleton, B. D.
Appleton, Daniel F.
Baker, S. N. Jr.
Bond, James W.
Bray, Frederick
Brown, Aaron F.
Brown, John
Brown, Manasseh
Brown, William G.
Caldwell, Abraham
Clark, Erastus
Cogswell, Ebenezer
*Cogswell, William
Conant. Gilbert
*Dodge, Richard T.
Fall, Tristam B.
†Farley, Alfred M.
*Farley, Joseph
†Farley, Robert Jr.
Fellows, Alonzo B.
Gould, John J.
*Grant, John
Grant, Joshua B.
Green, George H.
Haskell, George
Hobbs, John
Hodgdon, George
Hodgkins, Augustine
Horton, Joseph
Hunt, Samuel
Hurd, Y. G.
Jewett, Israel K.
Jordan, Robert Mrs.
Kimball, Charles
Kimball, Daniel
Kinsman, Joseph F,
Kinsman, William H.
†Locke, Calvin
Low, Thomas
Marshall, Joseph
†Merrill, Ezekiel O.
Mitchell, Frederick
Perkins, J. E. B.
Perley, David T.
Potter Asa T.
Rogers, Isaiah A.
Ross, Joseph
Shatswell, Nathaniel
Smith, Webster
Stone, Augustine
Story, Alden
Tappan, Amos
Treadwell, William
Underhill, J. C.
Wade, Asa
†Wade, William F.
Waite, Abraham D.
Whittier, Maynard
*Worcester, Ira

## LAWRENCE.

Ambrose, Nathaniel
Bodwell, S. B.
Bodwell, Asa M.
†Bryant, Oliver
Cabot, George D.
Currier, Eben B.
Currier, J. Merrill
*Decker J. M.
Durant, Adolphus
Durant, W. A.
Emery, Levi
French, A. J.
Gile, W. F.
Harmon, Nathan W.
Herrick, H. G.
Herrick, James D.
Hills, George W.
Hood, Gilbert E.
Howard, J. B.
Hubbard, Leavitt
Holt, Lewis G.
Kimball, Wm. F.
†Kimball, Josiah
†Kimball, Wm. M.
Lamb, William D.
*Maliard, L. Mrs.
Merrill, George S.
Page, E. F.
Page, Edward
Rollins, John R.
Russell, W. A.
Russell, George W.
Saunders, Daniel
Stevens, William
Shattuck,
Warren, Albert
*Webster, Charles
Wilder, G. W.
Wright, W. H. P.

## LYNN.

*Allen, Jacob A.
Baker, Ezra
Batchelder, John
Black, James D.
Breed, Andrews
Breed, Henry A.
*Breed, Nehemiah Jr.
Brown, Ira P.
Chase, Nathan D.
Chamberlain, Wm. D.
†Coggeshall, J. H.
*Collins, Ezra
Davis, Edward S.
Emery, George E.
Fay, William P.
Graves, Samuel
Harris, N. S.
Hawkes, Nathan M.
Healy, Mark
Hovey, Rufus P.
*Keene, George W.
Kimball, Rufus
Merritt, Charles
Newhall, Hiram L.
Newhall, Asa T.
Norris, George Jr.
*Nye, James M.
*Osborn, William
†Osborn, William H.
Potter, Edward P.
Putnam, F. W.
Rankin, John D.
Rhoades, Jacob
Roney, Simon J.
*Saunderson, Jos. N.
Shorey, John L.
Spinney, William N.
Sawyer, J. A. J.
Usher, Roland G.
†Wyman, Isaac

## LYNNFIELD.

Brown, Joseph
Danforth, John
Emerson, D. P.
Emerson, Hubbard,
Hawkes, George L.
Herrick, George E.
Mansfield, Andrew
Newhall, Josiah
Perkins, John
†Perkins, John H.
*Richardson, Chas.
Smith, Henry E.
†Smith, Joseph
Symonds, George W.

## MANCHESTER.

Allen, Luther
Allen, Wm. H.
Burnham, Frederick
†Chase, Joseph S.
Cheever, John H.
Cheever, William M.
Fields, James T.
Fitz, William F.
Friend, Daniel W.
*Gentlee, Thomas P.
Hildreth, John D.
Jewett, Alfred W.
Knight, Henry
Knight, John Jr.
Lee, Allen,
Lee, John
Moon, Ambrose
Price, John
Rabardy, Julius F.
Smith, A. W.
Sturgis, Russell Jr.
Tappan, Benjamin
*Tappan, Ebenezer
Tappan, Israel F.
Tappan, Lewis N.

## MARBLEHEAD.

Alley, Amos P.
Alley, James E.
Alley, Reuben
Alley, Franklin
Appleton, Thomas
Childs, Addison
Child, Caleb
Cloutman, Henry
Dennis, John

Gregory, J. J. H.
Hathaway, Joseph B.
Hathaway, Seth W.
†Millett, Joseph
Nutting, John
Paine, Thomas T.
Robinson, Frederick
*Stone, John
Ware, Benjamin P.
Ware, Horace
Warren, David
Winslow, George W.
Winslow, Aaron
†Wyman, Israel
†Wyman, Luke

## METHUEN.

*Barker, J. B.
*Barker, Stephen
Bradley, Leverett
Butters, George W.
Currier, Daniel
Davis, John
Dow, Lorenzo
Emerson, Jacob Jr.
Frederic, John W.
Gage, George W.
Goss, Charles E.
Herrick, Fred S. C.
Hicok, S. S.
How, Christopher
How, Joseph
How, Joseph S.
Ingalls, Charles
Ingalls, Joseph F.
*Low, John
Morrison, D. T.
Morse, Jonathan
Nevins, David
Patterson, D. H.
Phippen, G. S.
Rollins, Amos C.
*Russ, John
Sargent, S. C.
Sleeper, William C.
Tozier, C. L.
†Welch, John

## MIDDLETON.

Berry, Jonathan
Berry, William
Currier, George A.
Flint, James
Hutchinson, J. A.
Noyes, A. P.
Phelps, William A.
Stiles, David
Stiles, Farnham
Stiles, Farnham Mrs.
Stiles, Hiram A.
Wellman, John R.
Winslow, Henry B.

## NAHANT.

Goodale, Byron

## NEWBURY.

Adams, Charles
Adams, Charles W.
*Adams, John C.
*Adams, John J.
Bray, Richard S.
Caldwell, David S.
Colman, Moses
Goodrich, Wm. F,
Howard, Horatio M.
Illsley, Paul M.
Jaques, Richard
Jaques, Richard T.
Jaques, William
Kent, John N.
Kent, Joshua N.
Knight, Joseph
Kent, Otis L.
Kent, Edward
Kent, Albert S,
Langley, William C.
Little, E. C.
Little, E. F.
Little, Edward H.
Little, Joseph

Little, Nathaniel
Little, Silas
Little, Stephen W.
*Little, Tristram
Little, William
Longfellow, H. F.
Longfellow, J
Longfellow, J. Mrs.
Lucy, Gideon R.
Lunt, Charles M.
Lunt, J. Austin
*Lunt, Joseph
Moody, N. W
Newman, Sidney F.
Noyes, James
Noyes, Luther
Noyes, Moses H.
Perkins, Charles L.
Perkins, W. W.
Plummer, Daniel, Jr.
Plummer, G. H.
Plummer, Greenleaf,
Poole, B. P. Mrs.
Randall, G. A.
Rogers, Abial
Rolfe, Joseph N.
Tenney, H. L.
Woods, C. W.
Young, Hiram

## NEWBURYPORT.

Adams, Paul D.
Adams, J. Quincy
Adams, Rufus
*Akerman, John
Akerman, Joseph
Ashby, William
Balch, John H.
Ballou, C. N.
Bartlett, T. H.
Batchelder, Daniel C.
Battell, Elbridge
Boardman Isaac H.
Brewster, William H.
Bricher, William
Brown, David F.
Canney, Hiram
Capers, Thomas
Coffin, Frederic J.
Colby, George J. L.
Colby, George W.
Colman, Daniel T.
Colman, James C.
Colman, William T.
Currier, Warren
Cushing, Caleb
Cutter, Eben P.
*Davis, Benjamin
Delano, Otis
Dyer, J. R.
*French, Curtis
Gale, Stephen M.
George, George,
Griffin, Eliphalet
*Hale, Isaac, Jr.
Hale, Joshua
*Hale, Josiah L.
Hamlet, Daniel
Hart, James S.
*Horton, Daniel
Huff, William
Huse, William H.
Ireland, Charles H.
Jackman, George W.
*Johnson, William P
Kelley, E. G.
Little, John G.
Little, Moses S.
Lunt, Charles
*Lunt, Micajah
*Marston, Steph'n W.
Merrill, Enoch
Merrill, Samuel, Jr.
Morrison, Daniel T.
Morse, James M.
Morss, Joseph B.
Moseley, Edward A.
Moseley, Edward S.
Moulton, Henry W.
Moulton, Joseph
Newhall, Asa T.
*Newhall, Joshua L.
Nothend, E. T.
Noyes, William Jr.
Ordway, Parsons
*Page, John T.
Pearson, J. P.
Perley, R. M.
*Pettingell, Moses
Plummer, Moses A.
Plummer, Wm. C.
*Remick, John E.
*Robinson, J. D.
Shoof, Henry
Smith, David
Smith, Edmund
Smith, Joseph B.
Smith, Eunice L.
Smith, Robert A.
Stanley, B. F.
Stanley, J. C.
†Stearns, Edwin
*Stone, Jacob
Sumner, John
Tappan, Samuel B.
Tilton, Enoch
Tozer, Hiram
Thurlow, William
Titcomb, Paul
Toppan, Edward S.
*Williams, Robert
Winkley, J. Otis
Winkley, Paul T.
Wood, David

## NORTH ANDOVER.

†Appleton, S. F.
Bailey, Charles P.
*Berry, Jacob
Berry, Albert,
Blake, J. P.
Butterfield Chas. A.
Carlton, Daniel
Carlton, Joseph
Crosby, Josiah
Cheever, William J.
Davis, George G.
Davis, George L.
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Ware, Horace C.
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